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Original Articles

TREATMENT OF CHRONIC MYOCARDITIS.*

JOHN H. MUSSER, M.D.

PHILADELPHIA.

The condition to which attention is directed in this communication is one of chronic myocardial disease, a fibroid condition if you please, which results from, or is secondary to, sclerosis of the coronary arteries. It should be called coronary artery endarteritis, or chronic endarteritis of the coronary arteries with secondary myocarditis. This is the form which is to be kept in mind in discussing the details of treatment. It is not possible to pick out from the mass of humanity the individuals or class who are likely to be affected with this condition so as to apply measures of prevention. The patients only present themselves for treatment after the condition has become well established and our efforts are to be directed towards delaying the progress and alleviating the sufferings of the patient during the attacks of angina or dyspnea, or other myocardiac symptoms, which attend upon it, and adopting measures that will make the occurrence of these attacks infrequent. The treatment divides itself into hygienic management and medicinal management. The latter in turn depends much upon the associated lesions which are present in the case, and the amount of organic change that has taken place in the heart muscle especially.

When a case, which presents this condition of coronary endarteritis, or chronic myocarditis, comes before us, there is no question more important or so difficult to decide as that of how much rest will be required; whether he shall abstain entirely from business cares, or only partially. This depends largely upon the patient's station in life and must be decided from the standpoint of each individual case. Shall he give up his occupation entirely, or devote a few hours daily to it, while avoiding much exertion, and take the remainder of the day for rest? Much depends upon the proper decision of these questions, for the greater part of the cases are men of great responsibilities, which can not readily be given up, and our judgment of the matter means a great deal to them, as they are often busy men, who have active interests in educational, mercantile, political and other affairs. Our judgment must depend upon the conditions which we find to be present in the individual case, not only the condition of the heart and the vessels, but of other organs and the general state of the patient's health. Important to note are his excretory functions, his ability to digest sufficient food, his recuperative powers, and also the nature of his work. All these things must be considered, but we must be especially guided by the actual amount of the local sclerosis and the ability of the patient to recuperate after exercise, or the amount of fatigue that appears after ordinary exertion. In order to determine what changes must be made in his life, all the circumstances in the daily life of the individual must be weighed and given proper consideration. We must pass in review all the acts of the day, the character of his food, the power of digestion, and if there is any marked change or not in the gastric powers, and modify the character of the food and its quantity to suit the case. If dilatation or hyperacidity exists, this must be taken into account. If any tendency to gout or rheumatism is present due attention must be given to correct it. The character of the urinary secretion is to be frequently examined into for this purpose also. In short, we must be guided by all these considerations in our solution of the problem of diet. Then again, we must study the peculiarities of individual cases as to the effects of particular articles of food. Next, we must take up the question of bathing. Shall the patient be allowed to continue, if accustomed to take a cold bath in the morning, or shall he take some other form of bath in preference? Would he be benefited by the shock of cold shower or douche, or shall he be subjected to the relaxing effects of a warm bath? The answer to this, in any case, must depend upon the actual condition of the myocardium, and whether or not fatty degeneration is present, and, on the other hand, the condition of the general circulation. In the great majority of cases, the warm sponge bath at night, followed by moderate friction, will be sufficient, and all that can be safely done in the way of bathing. The saline baths as employed at Nauheim may be employed in many cases. In a few cases the steam bath, or hot-air bath, is useful, especially if the gouty or rheumatic diathesis be present. These baths may be given two or three times a week, according to effects observed. The clothing must also be looked into, but this and other hygienic matter of importance must be passed over in order to take up the question of treatment.

As regards the medicinal treatment of myocarditis, if we can settle upon a definite cause for the endarteritis or coronary artery disease, such as syphilis, this will to a large extent indicate the line of treatment to follow. In other cases, the treatment must be determined by the arterial condition, whether or not high or low arterial tension is present. In the treatment of the latter, digitalis in large or small doses, spartein, strychnin and other direct cardiac stimulants are useful. If there

* Read at the Fifty-second Annual Meeting of the American Medical Association, in the Section on Materia Medica, Pharmacy and Therapeutics, and approved for publication by the Executive Committee: Drs. Thomas Hunt Stucky, Leon L. Solomon, and N. S. Davis, Jr.

is high arterial tension present, it is the custom to give remedies which lower blood pressure, and those who give such remedies see delightful results from nitroglycerin, strontia salts and other agents which lower blood pressure. The fact is too often overlooked that some general measures also reduce blood pressure, such as purgatives. Many of these cases are benefited by salines given early in the morning, every day or two. In cases with high arterial tension, the use of magnesium sulphate every morning, or some similar salt, gives marked relief.

There are cases of chronic myocarditis, secondary to coronary artery disease, where we can not satisfy ourselves, or determine by ordinary physical signs, the exact state of the heart muscle—cases in which the condition may only be inferred from reduplication of the second sound of the heart and the state of the veins, where there is no dilatation of the heart walls. Nor, on the other hand, can we determine the existence of any hypertrophy, particularly that occurring with high arterial tension. There are cases of this kind in which the dyspnea is marked, with considerable arhythmia, in which we can not obtain any special evidence from the condition of the vessels that would indicate high arterial tension. These form a class of cases, in my mind, in which I feel that digitalis will be of benefit.

Now, as to the treatment of one or two of the clinical manifestations of myocarditis. The first we shall consider is angina pectoris. The treatment of the paroxysm is so familiar to all that it needs no argument concerning it; but the treatment in the interval should be considered. When in the course of myocarditis the attacks of angina occur, then it becomes necessary to modify the habits of life and to avoid too much active exertion. As remedial agents we use nitroglycerin, or iodid of potassium, and avoid digitalis and other preparations which increase the pressure of the blood. In using nitroglycerin, it should not be given in ordinary doses of a drop of the solution every two or three hours, but it should be rapidly increased until we get the physiological effects of the drug. Cases in the practice of the speaker had taken up to half a dram of the 1 per cent. solution three times a day with the greatest benefit. It is of this point which we wish to speak especially in the treatment of angina pectoris. In these cases in a fair measure it is in our power to prevent cardiac hypertrophy from occurring. The patient must be put upon a lower scale of life as regards exertion; as soon as he begins to live upon the same scale as an ordinary individual, with ordinary blood pressure, he will have attacks of angina pectoris.

The dyspnea of myocarditis is of two forms: That occurring with dilatation of the heart, the other with asystole. In one case, the dyspnea is almost constant, increasing into paroxysms in times of special excitement or exercise. The second form is that which occurs only in paroxysms, in attacks which take the form of sudden edema of the lungs, with chest oppression, and all the appearances of shock—pallor of surface, cold extremities, more or less anxiety, the expectoration of frothy material. Upon auscultation of the chest the bronchial tubes are found filled with râles, and on auscultation of the heart the most interesting conditions are found—arhythmia and asystole. It is often impossible to recognize any murmur on account of the râles in the chest. These cases are frequently mistaken for pulmonary conditions. Such a case must be treated first as a case of shock. We must relieve the pulmonary edema that has taken place; we must actively stimulate the heart and improve the circulation. Dry cupping of the chest and external hot applications bring the most speedy relief. There is no better remedy than morphin, administered hypodermically in small doses, for the relief of the patient. The speaker relied upon it, together with strychnia and nitroglycerin, where there is apparently a condition of high arterial tension; where this is not present morphin and strychnin alone will tide over the difficulty until the danger is past. Where there is venous stasis and lowered blood pressure, the use of digitalis and ordinary stimulants will be sufficient to overcome the condition. The speaker knows of nothing which required closer study and care in the application of therapeutic measures than these cases of chronic myocarditis. We must study not only the cardiac or cardiovascular condition, but also that of all the organs and structures of the body in order to treat them with satisfactory results and afford them the greatest amount of relief and comfort.

DISCUSSION.

DR. HENRY BEATES, Philadelphia, said that he had listened with interest to the remarks of Dr. Musser, because so far as the medical treatment of the class of cases described was concerned, experience had placed him in a position of direct antagonism to the views just expressed. He entirely agreed with the speaker in so far as the general hygienic management of these cases was concerned, and with that part of the communication which had a special reference to prophylaxis, but when the medical treatment of these cases is considered, personal experience with chronic myocarditis consequent upon endarteritis, whether it be of the coronary artery or elsewhere throughout the arterial system, compels him to take an exactly opposite position from the essayist, and to advocate the use of circulatory stimulants as a general principle, and the avoidance of circulatory depressants. The point he desired to particularly make clear was, that there is a great accumulation of blood in the venous system and a relative diminution of the volume of blood in the arteries. Hence, in these cases where the symptoms of distended veins, pallor, dyspnea, diminished renal secretion, etc., obtain, there is not increased arterial tension, but, on the contrary, marked diminution thereof. The theory advanced by the essayist is that, under these conditions we must administer large doses of cardiac depressants and notably, nitroglycerin. Let me direct attention to a strange fact; when nitroglycerin is employed in these conditions for relief, the paroxysms generally are aggravated and still larger doses in extreme cases are then administered. The result is that the symptoms are all intensified, and when a serious collapse threatens, then the administration of these depressants is abandoned, and, in their place, is administered what should have been in the first instance, namely, digitalis, ammonia, strophanthus and alcohol. It is submitted that whenever there is increased venous congestion, other things equal, there must be lessened arterial tension. The physiology of this matter is too large a subject to be introduced in this discussion, and it must be left with the simple statement. In the intervals between the attacks of angina pectoris, there is a condition of more or less constant dyspnea, rapid irregular intermittent cardiac action, with distended veins, venous hyperemia of the kidney, cerebral venous hyperemia, or, if you choose, arterial ischemia, and a digestive tract which, by reason of the distended veins, is incapable of performing the functions of absorption. If these conditions are met by the use of remedies that stimulate the action of the arteries, not the heart especially, then these cases of chronic myocarditis will be greatly relieved and they may live in comparative comfort and the paroxysms described and the fatal result postponed for from many months to several years. He said this after an experience of many years with large numbers of cases which had been treated unsuccessfully with the use of cardiac depressants; these especial cases have been restored by the continued use of arterial stimulants to a condition of

comfort which, from the clinical phenomena presenting at the time they first came under observation, there was no reason to believe could be accomplished. The explanation of this mode of treatment is based upon the fact that it is the function of the arteries to propel the blood, and if the profession will ever realize the fact that each artery is practically a heart for the area it supplies, it will be understood that arterial tension for that area can not possibly exist while the veins of the same region are in a state of turgescence.

The remedy he had found efficient for restoring lost circulatory equilibrium, whether it be local or general, was that one derivative of digitalis manufactured by Merck, and known as digitalin Germanic. None other will do it. The ordinary official preparations of digitalis can not be relied upon to accomplish this with any degree of certainty, because the different constituents of the crude drug are possessed of varied physiologic power. Then again, they exist in a given specimen of the true drug in such varying proportions and are differently soluble in the menstruum used for the preparation, that it is impossible to state, until the actual therapeutic value of the given preparation is determined, whether the property desired is possessed or not. For illustration, alcohol dissolves certain derivatives and therefore the tincture of digitalis will contain principles which the infusion does not. He had, after careful comparative study, abandoned commercial digitalin, digitoxin, digitalin verum, in a word, all but the one especially designated. This is made by precipitating a principle from the infusion of digitalis by the use of tannin; this is subjected to a chemical process, which can not at this time be described. The administration of this especial derivative is safe, and other things equal, will invariably restore circulatory equilibrium. It should be exhibited in doses varying from one-fourth to one-half grain, from three to six times daily as especial conditions indicate. In conclusion, experience had shown that the conditions described called for the administration of arterial stimulants and especially the remedy named. Arterial depressants as a rule should never be employed. There are conditions in which rarely it is necessary to employ both, for reasons which familiarity with the physiology of circulation will make plain.

DR. S. E. SOLLY, Colorado Springs—He regretted that the essayist did not go further and mention the effects of climate upon these cases, as patients are often advised to travel and many are sensitive to climatic change. This is especially true when the change is to a high altitude. Patients with chronic myocarditis or coronary disease sent to Colorado often improve because of the lowered arterial tension which the diminished barometric pressure produces. They may do well as long as they remain quiet and avoid active exercise, but even slight exertion at a high altitude is much more dangerous for them than at sea level. On this account he did not believe that, as the rule, high climates are suited to these cases. At the same time he had been surprised to find how much many of them could do without showing ill-effects, going up Pike's Peak for instance. Of course this was accomplished without exertion as they were carried up in the train, but they did it without being injured. Though some cases reside permanently in Colorado with benefit and comfort, yet the safe rule is to send these patients to less extreme climates of moderate altitude where the air is also sunny but more equable in temperature, and while not absolutely damp has more moisture in it than that of the higher altitudes.

DR. O. T. OSBORNE, New Haven, Conn., thought that if the two speakers from Philadelphia could be brought together in consultation over a case that there would be very little difference between them in the treatment of chronic myocarditis. The special preparation of digitalin mentioned has not been sufficiently studied, as it is of recent introduction and more experimentation is needed to decide whether it is a vaso-dilator or vaso-constrictor.

DR. BEATES—It is a vascular constrictor.

DR. O. T. OSBORNE—Our information upon the effects of these remedies has been recently much extended by the discovery that there is a vaso-dilator element in the adrenal gland and it gives a stimulus for more careful study of all cardiac drugs. In the condition under consideration, we sometimes need a vaso-constrictor and sometimes a vaso-dilator, but we almost always need morphin. Nitroglycerin given over a long period is also of much value. He had often thought that the cases that occur after the age of 45 years, when the thyroid gland is beginning to atrophy, may be really due to a decrease of the functional activity of the thyroid. In fact he had found in many cases that small doses of thyroid extract have been productive of good effects. He had also used potassium iodid with satisfactory results, but believed that he had observed better continued results from the use of the thyroid in these cases.

THE INFLUENCE OF SOME OF THE COMMONER DRUGS UPON THE GASTRIC FUNCTIONS.*

BOARDMAN REED, M.D.

PHILADELPHIA.

The following observations were made in my laboratory on five persons employed in an office building in Philadelphia during February, March and April, 1901. None of them complained of their stomachs. They were not invalids or under medical treatment, though some of them realized that they were not in robust health.

In every case the stomach contents were extracted by a Kuttner rubber bulb, one hour after an Ewald test breakfast, with one exception, when the time was fifty minutes. The contents were filtered before being examined. No attempt was made to empty the stomach completely, since to do this adds needlessly to the discomfort of the procedure and does not add any important reliable information. The motor power of the stomach can be measured much more accurately and conveniently by other means.

All the persons thus experimented upon had been eating ordinary diet, and were directed to continue with the same food and under like conditions otherwise, during each period of observation.

For the sake of convenience the results of the various tests have been arranged in the form of tables, which are here given:

It is first of all noteworthy, that of these five average persons, all engaged actively in earning a livelihood and none of them complaining of any stomach symptoms, only two, Cases 1 and 2, had an approximately normal gastric secretion and peptonizing power. Case 4 showed some sourness from fermentation and far too low a figure for the combined HCl, which is a fairly accurate measure of peptonization. Other tests pointed to deficient motility in this case. The total acidity percentage of HCl was, however, about normal. The two others had less than the normal amount of HCl; indeed, a marked deficiency of it.

The tincture of nux vomica was chosen for the first test, since it is one of the most active and bitter, as well as one of the most commonly administered, of all our so-called stomachic and general tonics. The results might at first be considered rather contradictory, since in two cases (Nos. 1 and 2) the use of the remedy before meals for five days produced a lessened secretion, while in the other three there was a decided increase. This outcome is especially interesting for the reason that the depressing effect took place in the two persons whose gastric juice was practically normal, persons, therefore, who did

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Date of Test.	Color of chyme.	Odor.	Amount of mucus.	Digested.	Total acidity.	Amount of free HCl, by Toepher's method.	Amount of combined HCl, by Toepher's method.	Remarks.
				Case 1.—Male, aged 27.				
Preliminary test Feb. 21, '01	Gray.	Normal. . . .	Small	Fairly.	62	.094	.043	From Feb. 21 to Feb 26 he took 10 gtts. tr. nux vom. before each meal.
Feb. 26, 1901.	Gray.	Normal	Small	Fairly. . . .	48	.043	.014	Motility much increased; not enough stomach contents obtained at first attempt; second time extracted at end of 30 minutes.
March 4, 1901.	Nearly white .	Sour.	More than before.	Pretty well . .	64	.102	.094	Had taken 10 gtts. dilute HCl after each meal for the 5 days before.
				Case 2.—Male, aged 23.				
Preliminary test Feb. 22, '01	Yellowish . . .	Normal	Small	Not fully . . .	36	.043	.109	From Feb. 22 to Feb. 27 he took 10 gtts. tr. nux vom. before each meal.
Feb. 27, 1901.	White.	Slightly sour .	Small	Partly.	36	.029	.080	After taking 10 gtts. tr. nux vom. before meals 5 days.
March 4, 1901.	Not noted. . .	Not noted . .	Not noted.	Not noted. . .	38	.073	.051	After taking 10 gtts. dil. HCl for 5 days after each meal.
				Case 3.—Male, aged 26.				
Preliminary test Feb. 20, '01	White	None	Moderate	Fairly.	30	.018	Not enough chyme to make the test.	Subacidity with hypermotility.
Feb. 26, 1901.	Dirty yellow .	Slightly sour .	Moderate	Fairly.	40	.029	.043	After taking 10 gtts. tr. nux vom. before each meal for 5 days.
March 5, 1901.	Yellowish white.	Slightly sour .	Small	Fairly.	48	.065	.080	After taking 10 gtts. dil. HCl following each meal for 6 days.
April 8, 1901.	White	Sour.	Small.	Well.	50	.054	Not enough to test for this.	During interval of month has taken HCl irregularly. Began scale pepsin after each meal.
April 19, 1901.	Yellowish white.	Aromatic . . .	Small	Well.	40	.043	.073	After taking 5 grs. of scale pepsin after each meal for 11 days.
				Case 4.—Male, aged 58.				
Preliminary test, Feb. 21, '01	White	Sour.	Moderate, from throat.	Well.	49	.054	.023	Normal HCl; fermentation excessive; peptonization deficient.
Feb. 23, 1901.	Clear and limpid.	Sour.	Moderate, from throat.	Well.	54	.080	.051	After taking 10 gtts. tr. nux vom. before each meal for 2 days.
March 1, 1901.	White	Sour.	Moderate, from throat.	Fairly.	60	.094	.102	After taking 10 gtts. dilute HCl after meals for 6 days.
April 2, 1901.	Not noted. . .	Not noted. . .	Moderate, from throat.	Well.	62	.109	.065	Had continued to take HCl after each meal. Now omitted HCl and began taking 5 grs. scale pepsin after meals.
April 11, 1901.	Gray.	Sour.	Moderate, from throat.	Well.	50	.065	.057	After taking 5 grs. scale pepsin after each meal for 17 days.
				Case 5.—Female, aged 34.				
Preliminary test, Feb. 22, '01	Gray.	None	Moderate	Poorly.	18	None	.021	Marked hypoacidity and hypopepsia. Began taking nux vom. before meals.
Feb. 27, 1901.	Gray.	None	None	Fairly.	26	.010	.051	After taking 10 gtts. tr. nux vom. before meals for 5 days.
March 5, 1901.	Light gray . .	None	None	Pretty well . .	46	.065	.058	After taking 10 gtts. dilute HCl after meals for 5 days.
April 8, 1901.	Light gray . .	None	None	Pretty well . .	37	.029	.047	Continued the HCl for a few days only after last test. Now began taking scale pepsin 5 grs. after meals.
April 15, 1901.	Light gray . .	None	None	Fairly.	32	.029	.040	After taking scale pepsin 5 grs. after meals for a week.

not need medicine for their stomachs; and the stimulating effect occurred in the three who exhibited manifest gastric faults, one of them a somewhat impaired motor power, and the two others a marked lack of HCl. Five cases are too few, of course, to warrant any sweeping inferences, but there has been an abundance of clinical observations which show that any organ which is functionating healthfully already, is likely to be injured by drug stimulation.

The next test, to ascertain the effect on the gastric glands of administering HCl regularly for a time, yielded remarkably striking results, which being in complete harmony with clinical observations reported of late from various parts of the world, must be accepted as conclusive.

Every one of the five persons who took 10-drop doses of dilute HCl in water after meals for a period of five to six days, experienced a very positive stimulant action upon the glands whose function it is to secrete HCl, and the two virtually normal stomachs whose glandular apparatus was depressed by the nux vomica, not only regained what had thus been lost, but had their secretion carried to a higher level than before; higher, indeed, than normal. In one of these the HCl reached a point which may be considered hyperchlorhydria. And this resulted in the short period of five days from doses of dilute HCl, which many writers regard as altogether too small to be effective.

But the mistake has frequently been made of overlooking the exceedingly important fact, that this remedy, be-

sides its occasional palliative action when given in very large doses, by aiding a deficient gastric juice directly in the work of peptonizing proteids in the stomach, in the presence of a sufficient amount of pepsin or propepsin, possesses also the property of exerting positive stimulant action upon the glands by which HCl is secreted. This point was emphasized by me in a paper read before this Section three years ago.[1] In that paper I referred also to communications upon the same subject by Hemmeter in this country, as well as by Wegele, Riegel, Reichmann and Mintz in Germany.

All the above-named authorities have become convinced that the administration of HCl as a medicine tends gradually to increase the secretion of the same acid by the stomach. In some of my cases in which there was an almost entire absence of such secretion, the administration of dilute HCl in doses of five to ten minims after meals for long periods, as three to six months continuously, has been followed at last by a restoration of the secretion to the normal amount.

The fact that small doses of HCl, in conjunction with other appropriate treatment, may produce this restorative effect, in many cases—probably in most cases in which atrophy of the glands has not developed—may be considered as fully established. It has been also proved that even small doses of HCl may set up hyperchlorhydria in normal stomachs, or aggravate it, when that condition already exists.

Three of the persons experimented upon took 5 grains of scale pepsin (that made by Parke, Davis & Company), for periods of from seven to seventeen days. They were Cases 3, 4 and 5, those whose stomachs, it will be observed, were least normal. These tests of pepsin were made about a month after finishing with the other ones, though in Case 3, the person finding HCl so beneficial, had taken a dose or two nearly every day during the interval, and Case 4 had taken it with an approach to regularity during the same time. Case 5 had taken no HCl for fully three weeks when she began the use of the pepsin after meals. None of the three took any HCl during the experiment with pepsin. Without these explanations one might infer from the results shown in the tables above, that an active preparation of pepsin, so far from exerting any restorative influence, tends to produce a lowering effect upon the gastric secretion, and possibly it may in some cases. But it will be noticed that in the trial upon the person (Case 5), who took no HCl for several weeks before the pepsin test, there was virtually no change in the amount of the HCl secretion and digestive work done before and just after the week during which pepsin was administered.

In the other two cases the falling off in the secretion of HCl and in digestive work during the period that pepsin was administered and HCl not administered, may, therefore, no doubt, be properly attributed to the withdrawal of the acid, which we now know to be our most active gastric stimulant.

It is a fair inference from these experiments that pepsin given as a digestant, though known from a large number of clinical observations to be a helpful palliative under certain conditions, does not, at least, like numerous other glandular products of the body, tend to augment the natural secretion of the same by its prolonged use.

An additional series of experiments was carried out in April, 1901. In each of five different persons, three of whom had a deficient secretion of HCl at the time, the following experiments were made, and in the case of one of them the same were repeated a week later: Small cubes of coagulated egg albumin of the same size were prepared and one of these introduced into each of four test tubes with 3 c.c. of the filtered stomach contents taken up one hour after an Ewald breakfast. Nothing further was put into tube 1; to tube 2 two grains of scale pepsin were added; to tube 3 one drop of dilute HCl, and to tube 4 both pepsin and HCl were added. All the tubes were then placed in an incubator and the temperature kept as nearly as possible at 38 C. The results of these tests need not be reported here in detail, yet a summary of them may be instructive:

In two only of the six tubes to which pepsin was added was there shown any more rapid solution of the egg than where the chyme alone was allowed to act. The analysis in one of these two cases previously made had shown somewhat more than the normal proportion of HCl—free HCl, .094; combined, .080—and the other revealed a marked deficiency.

In the other five experiments, while in every case except one there was free HCl present though deficient in amount, there resulted a distinct retardation of the digestive process in all the tubes in which pepsin alone was added to the mixture of chyme and egg.

The addition of HCl alone produced a doubtful result in one case, i. e., there was no appreciable difference between the amount of digestion in the tube with only the stomach contents and that in which HCl was added. In three of the cases it helped more or less, though in one only slightly. In the case of one person with whose chyme the test was made twice at an interval of one week, the result was each time a positive retardation of the digestive process. The analysis of a portion of the same chyme showed the first time T.A. 50, with free HCl .065, and the second time T.A. 46 and free HCl .065, combined HCl .058—certainly not an excess of secretion.

The addition of both the HCl and scale pepsin produced a more rapid solution of the egg in each of the six trials. Test-tube experiments in digestion have, of course, much less value than when the remedies are administered to living persons. Many of us have been led to consider pepsin especially a very mild and safe remedy, which is not likely to do harm even if it can do no good. Acting on this principle, I recently prescribed moderate doses of pepsin for a very delicate lady who would not permit a test of her stomach contents to be made, and the result was a severe aggravation of her symptoms. She then informed me that she had once before experienced a similar result from the same medicine.

The increased digestive power exhibited by all the six specimens of stomach contents when pepsin and HCl were both added, even in persons the action of whose gastric juice was notably retarded by either drug alone, is curious and most interesting. It shows the folly of dogmatizing too positively as to just what part any particular element of a secretion plays in the observed effect, and the wisdom of humbly endeavoring to imitate Nature as nearly as possible in concocting remedies to supply a deficiency in the work of any organ. It is very likely that if we should combine pepsin, HCl and rennin with water and the other minor ingredients of the gastric juice in the proportions usually found in the human stomach, we should obtain a remedy of much greater effectiveness than any now in use for weak digestion.

The results of the foregoing experiments would seem to point toward the following conclusions:

1. The Place of Hydrochloric Acid in the Treatment of Diseases of the Stomach. By Boardman Reed, M.D., JOURNAL A. M. A., 1898, and Int. Med. Mag., October, 1898.

1. Perfectly normal stomachs are probably in the minority in large cities, especially among persons employed indoors.

2. In stomachs which are normal or approximately so, the digestion may be injured by a simple bitter tonic, taken even for a short time.

3. Quite moderate doses of HCl administered as a medicine may prove effective in hypochlorhydria, but are likely to do harm to normal stomachs and certain to aggravate hyperchlorhydria.

4. Pepsin rarely produces any good result when given alone, even to persons with weak digestive power, and often then retards the digestion of albuminoids.

5. Pepsin and HCl given together much more frequently do good than either administered singly.

I desire to acknowledge my indebtedness to Dr. C. B. Worden, my assistant, for his efficient services in carrying out many of the details of the above described experiments.

TREATMENT OF CHRONIC ROUND ULCER OF THE STOMACH.*

G. FUETTERER, M.D.

CHICAGO.

Medical men have always had an inherent desire to put therapy on a rational basis. This feeling could not be downed any more than truth itself; knocked down, it would rise again to renewed effort. *Cessante causa, cessat effectus,* is the never-dying war cry that rings in our ears from generation to generation. Such thought leads me to commence my paper on treatment of ulcer of the stomach with a consideration of its etiology.

A normal stomach does not digest its own tissues, neither as a whole, nor in part, and when self-digestion does take place it involves circumscribed portions, showing that there are agents contained in the gastric juice which act in harmony with certain local causes that lessen the resistance of parts of the wall of the stomach, allowing a partial self-digestion, which leads to the formation of a so-called round, peptic, perforating, chronic ulcer of the stomach. So we have two causes, one in the gastric juice, which is uniformly distributed through the interior of the stomach, and the other, which, at least during life, is always localized, and, therefore, only permits a part of the wall of this organ to become digested. Both causes have received due consideration, and still we can not say that our views concerning the etiology of ulcer of the stomach are sufficiently cleared to allow a good understanding of the factors at work and their comparative value. Hyperacidity, or rather hyperchlorhydria, of the gastric juice on one side, and local circulatory disturbances from vasomotor irregularities, embolism, atheroma, thrombosis or hemorrhage, on the other, whatever their causes may be —traumatism, chemic and thermic influences—are considered as the main factors bringing about the formation of gastric ulcers, and no doubt they all are of greatest importance. But if we consider the attempts which have been made by experiments on animals to show the value of those different factors, we are forced to admit that we have not yet arrived at a full understanding. If we review literature on this subject, we find that many successful attempts to produce artificially ulcer of the stomach in animals are recorded. Hydrochloric acid has been brought into the stomach; chemic, thermic and traumatic lesions of the mucosa have been made; blood vessels have been ligated; hemorrhages, embolisms and necroses have been produced; the nervi vagi have been cut; the duodenum was ligated, and the reports tell us that typical ulcers were produced.

I have repeated many of these experiments without being able to convince myself of their reliability. I also have succeeded in producing ulcers which in many instances had quite the appearance of ulcers as they occur in men, but a more thorough macroscopic and microscopic examination soon convinced me that they were healing ulcers, granulations covering their basis, and an epithelial covering growing towards their center from all sides. The gastric ulcer in man has no tendency to heal. It is chronic in character, and, therefore, we can not allow the statements of those to go unchallenged who have been satisfied with observing general macroscopic appearances, merely stating the presence of ulcers, without giving a detailed macroscopic and microscopic description.

Silbermann[1] has wisely considered another important factor, hemoglobinemia. Destroying hemoglobin by injections of hemoglobin and pyrogallic acid, and then causing embolisms, mechanical injuries, etc., he has produced ulcers, leading to hemorrhage and perforations, which would lead us to think that, although he does not report microscopic findings, he has produced genuine ulcers.

I have made a great many experiments, but, considering that my subject is treatment of ulcer, I shall not go into detail. I have resected mucous membrane of the stomach, removing one-third of the volume of blood of the animal right after operation. Result: After two weeks the defect was healed.

Again, mucous membrane was resected, one-third of the blood volume removed right after operation, and again as much as possible, without killing the animal, three days later. Result: After two weeks an ulcer that had the appearance of ulcer in man, but fresh granulations at its basis, and microscopic examination showed that an epithelial covering was growing from all sides towards the center of the ulcer; it was in the process of healing. Then, the same experiment was made, and the animals were allowed to live a week or two longer. Result: The ulcers had healed.

Conclusion.—A lack of volume of blood does not promote the formation of an ulcer.

After this, the same experiments were repeated, and the hemoglobin was destroyed by frequent injections of pyrogallic acid. Result: Typical ulcers which macroscopically and microscopically showed no tendency to heal. These findings compare well with our clinical experience in gastric ulcer of man.

In younger years we find gastric ulcer in combination with chlorosis, and in later years with different forms of secondary anemia, from lack of digestion or assimilation, atheroma, thrombosis, embolism, hemorrhage, thrombosis, malaria and syphilis. The general factor, anemia, or rather hemoglobinemia, is to be considered most important, while the others, the local causes, are of more secondary consideration. On this basis we must establish our plan of treatment. I feel that I can make the dictum that an ulcer of the stomach can form only when there is a certain amount of hemoglobin lacking, and that it must heal when the hemoglobin percentage is increased to a certain amount.

* Read at the Fifty-second Annual Meeting of the American Medical Association, in the Section on Materia Medica, Pharmacy and Therapeutics, and approved for publication by the Executive Committee: Drs. Thomas Hunt Stucky, Leon L. Solomon and N. S. Davis, Jr.

1. Deutsche Med. Wochenschr., No. 29, 1886, p. 497.

Based on these conclusions, I proceed as follows: When an ulcer of the stomach is diagnosed, even if a copious hemorrhage from the stomach has just occurred, or, if in the absence of classic symptoms there is reason to believe that a patient has an ulcer of the stomach, then I first examine the blood, ascertaining the percentage of hemoglobin. The patient is then put to bed, the juice of five pounds of beef daily, properly prepared, is administered, until the percentage of hemoglobin becomes or approximates the normal, or nearly so, and then we prescribe a rest cure, as it is usually employed, lasting from four to six weeks, giving beef juice when necessary, always controlling the percentage of hemoglobin by regular examinations of the blood.

The general consensus of opinion as to the value of the rest cure is very favorable, and rightly so, but we must consider that by subjecting a patient who is already anemic to such a treatment, we do not meet all of the indications. By keeping the stomach quiet, we no doubt add to the chances which promote healing of the ulcer, while, on the other hand, by starving the patient, or by giving only milk and nutritive enemata, we make worse the anemic condition, thereby lessening the chances for healing of the ulcer. By administering the elements which are lacking in the blood, and putting the organ at rest, we meet both indications.

The immediate effect of the rest cure is, as a rule, very pleasing, but if we observe our cases critically after they have left "cured," we will find sufficient cause to correct our statistics, and the ultimate prognosis will appear in an entirely new light.

To outline my mode of treatment in a general way, I would recommend the following:

1. If we diagnose an ulcer of the stomach, or if, in the absence of convincing symptoms—which are so often lacking—we have cause to suspect an ulcer, we must at once ascertain the percentage of hemoglobin.

2. We advise the patient to go to bed, either in a hospital or at home, employing the services of a trained nurse.

3. We give the juice of five pounds of beef daily, as the case may require, to bring the percentage of hemoglobin up to normal as soon as possible. Prepared beef extract does not give the desired result. Peptonized beef solutions are not tolerated in sufficient quantity.

Leube-Rosenthal beef solution soon becomes objectionable to the patient.

Beef juice prepared as follows is generally well taken, and gives excellent results in uncomplicated chlorosis, and in secondary anemia, that is not caused by carcinoma, etc.

DIRECTIONS FOR PREPARING BEEF JUICE.

1. Order five pounds of finely-chopped round steak, to be brought at 8 o'clock every morning, or keep it in an ice-box from the day before. The fat should be removed before the beef is chopped.

2. Mix the meat with a teaspoonful of salt, and put it into the upper part of a double boiler. Cover without adding water.

3. Fill the lower part of the boiler with warm (not hot) water.

4. Keep the boiler on a kitchen stove for four hours, keeping the water in the lower part of the boiler just warm, so a hand can be placed on the latter without burning it. This will do, as a rule, but the use of the thermostat, regulating the temperature to 120 F., gives more uniform results.

5. Turn the beef every hour.

6. After four hours press out the juice with a potato-masher, spice, and let patient drink it in two portions, one-half at dinner and the other half at supper.

Five pounds of beef yield about a pint of juice, which will necessarily have to be taken in one portion at supper, if the patient works during the day.

In other cases, one-half should be taken at noon and the other half at supper. The juice should be of a roast-brown color.

After the percentage of hemoglobin has become normal, the patient should have nothing to eat or drink for from two to five or six days. During this time the teeth must be kept very clean, and a good mouth-wash must be used often.

Rectal-nourishing enemata may be given twice a day, preceded by a cleansing enema. Not more than one cleansing enema should be given before the food is injected. The nutritive enema may consist of one egg, five grains of pepsin, eight ounces of normal salt solution and a glass of claret mixed.

If the enemata should cause discomfort, they must be stopped immediately. I have observed serious collapse in a perfectly healthy man, 28 years of age, after such injection, and frequently discomfort was caused in others, quite out of proportion if we consider the slight benefit derived from such enemata. Nutritive enemas become really unnecessary when we allow our patients the use of large amounts of beef juice. After the days of total abstinence from eating and drinking, we give milk for a period of from four to six weeks, ordering beef juice whenever necessary. The patient is then permitted to partake of solid food, either according to Leube's diet, if all goes well, or, if I do not feel assured about the progress of the patient, Pentzold's diet is employed.

The immediate results of such treatment, if well applied to the individual case, are very gratifying indeed, but the prognosis of ulcer of the stomach is not nearly as good as our statistics would make it appear. A great part of the later complications occur, because:

1. Patients present themselves too late.

2. The diagnosis is frequently not made, because the so-called classic symptoms are not manifest.

3. Hemoglobinemia is not sufficiently considered, and, if so, not properly treated.

In conclusion, I wish to say that I am very much inclined to recommend gastro-enterostomy early, in cases of stenosis of the pylorus, particularly if I am convinced that it is caused by the scar of an ulcer of the stomach, on account of the frequency with which carcinomata originate from such ulcers, through mechanical irritation of their margins. Such a mechanical irritation is much relieved by gastro-enterostomy, and, therefore, the danger of carcinomatous development may often be averted.

Let me give the history of two cases, one to illustrate my mode of treatment and the second to show that carcinoma may develop from a very small ulcer of the stomach.

CASE 1.—Chronic round ulcer of the stomach. (Short extract from the history.)

October 22, 1900. Mr. B., aged 37 years; married, two children. Rheumatism and gout in the family. Measles, rheumatism twelve years ago, and ten or twelve times since laid up. Two or three weeks at the longest. Malaria.

Present trouble seems more indigestion, dyspepsia, bloating, sour; sometimes pains one hour, or four or five hours after meals. Pain feels as if someone had hold of his epigastrium, twisting him up. Burning pain, principally under sternum. Trouble commenced fourteen years ago, when he was traveling.

Lost from 178 pounds to 138 in a year, from 1886 to 1887. At that time more distress, no sharp pain, sometimes several weeks would go by without trouble. He feels it more during spring and fall. He never vomited. A week ago, on the 12th, he had a large hemorrhage, fainted at 2 or 3 p. m. on the closet; when he recovered there was vomiting, but apparently no blood. Had his lunch at 10:30, eating a little celery and drinking some hot Scotch whisky. At supper he had a very small oyster stew, and not half a slice of bread. At 7 a. m. took a hot water injection, and then passed a good deal of blood, most of which was dark. He fainted and came to, and after half an hour there was another small hemorrhage. Felt weak, but not excited. Urine: no albumin or sugar. Blood: specific gravity, 1049.

Diagnosis: Ulcus ventriculi; dilatatio-ventriculi; gastritis chronica.

The patient entered the hospital, and was put to bed on Oct. 22, 1900. He received the juice of five pounds of beef daily, given in three portions, and also some milk. On November 7, the specific gravity of his blood having reached 1060, he received nothing to eat or drink from November 7 at 6 p. m. to November 9 at 6 p. m., and after that milk, and off and on also beef juice. On November 23 clear soup and lentil soup, from which the lentils had been removed, was allowed. The first solid food was given on December 2; and gradually additions were made to the list of diet. He left the hospital on December 13, without having had any trouble with his stomach at any time, and his stomach has been well since.

CASE 2.—Adeno-carcinoma of the stomach originating from chronic round ulcer. (Case of Dr. G. Fütterer.)

Mrs. G., 59 years of age, comes from a healthy family, but a brother died from carcinoma of the stomach, at the age of 42. About twenty-three years ago patient had dull pains in the epigastrium, which commenced with vomiting, that occurred daily, at irregular hours, for about three months. Every year similar attacks occurred, lasting from two to three months, the last one from June, 1899, to the time of her death, on Nov. 19, 1899. While she was under my care, she was treated for ulcer of the stomach in the hospital, after Leube's method. She improved very much, the pains disappearing almost entirely, and I expected her to get well. She was very anemic. After four weeks of treatment she left the hospital. Very soon, about a month after the patient had left the hospital, the pains recurred, the anemia grew worse, and emaciation became quite marked. As she had to be kept under the influence of morphin, and, believing that a carcinoma had developed from an ulcer, I recommended operation. On Nov. 16, 1899, an operation was performed, and a very small round ulcer, about the size of a dime, was found near the lesser curvature, somewhat to the left of the middle part of the stomach. From a portion of the margin of this ulcer had developed a whitish growth, appearing in the form of two nodules, measuring 1.5 to 1 centimeter. Macroscopic inspection and later microscopic examination showed that the ulcer had not healed, and that there was no tendency to healing. The small growth was an adeno-carcinoma, with infiltration of the submucosa, and muscularis. A gland which was attached to the outer side of the affected parts of the wall of the stomach affected was in a hemorrhagic condition, but metastases have, so far, not been found. Ulcer, growth and about an inch of the stomach's wall in circumference were resected, and this whole piece has been imbedded, cut and examined microscopically. We do not intend to describe the microscopic findings, as the microphotographs show them clearly.

Conclusions.—1. Although the patient's pains had disappeared almost entirely during the application of the rest cure, which led us to believe that the ulcer had healed, we found that it did not show the slightest tendency to heal, therefore the disappearing of the symptoms does not necessarily indicate that the ulcer has healed.

2. We have seen an adeno-carcinoma develop from a round ulcer of the stomach, which was very small, indeed, and this throws new light on the prognosis of chronic round ulcer of the stomach.

DISCUSSION ON PAPERS OF DRS. REED AND FUETTERER.

DR. JAMES B. HERRICK, Chicago, said that he was convinced that the importance of medical treatment in ulcer of the stomach had been underestimated by the medical profession speaking generally. Besides the possibility of a fatal result by hemorrhage or peritonitis, with the occurrence of perforation, there are the more remote dangers of the appearance of carcinoma in the cicatrix, or contraction of the pylorus producing obstruction for which surgery offers the only means of relief. So that whatever contributed to our knowledge of the proper treatment of the ulcer of the stomach, is of great interest and importance. He had been acquainted with Dr. Fuetterer's studies of the pathology of ulcer of the stomach and could say that his work deserved the highest praise. It seems that he had laid more emphasis, than upon any other cause, on the influence of the blood in the causation of gastric ulcer. He had pointed out the fact that, when the hemoglobin is deficient, we get a gastric ulcer and that until this deficiency is corrected, by proper treatment, the ulcers have no tendency to get well, and, in fact, resist all medical treatment. Yet pathologists tell us that they often find stellate cicatrices which they interpret as healed ulcers which have healed without medical aid. The line of treatment must take into consideration the nature of the causes which produced the ulcer, and the agency which keeps the ulcer from healing. This latter is mainly the constant motion of the stomach, after the partaking of food, the constant motion also in walking and in other movements of the body. Perhaps above all, it is kept from healing, by constant irritation from the gastric juice which is poured out during digestion. The method of treatment which seemed to be the most natural, would be that which allowed the greatest rest to the stomach. The experience of physicians generally would seem to indicate that the more nearly perfect rest for the stomach is secured, the more satisfactory is the result. This would involve placing the patient in bed, adopting the plan of Leube, keeping the patient at rest for a few days and giving him Carlsbad salts or alkalies in order to overcome the acidity of the stomach, and using nutritive enemata. Very good results have been reported by this method; in fact Leube reported 70 per cent. of recoveries. The speaker's own plan is to carry out a modification of the method of Leube, namely, to put the patient at rest in bed with absolute rectal feeding for three to twenty days, thus keeping the stomach walls at rest as perfectly as possible, and making the gastric juice small in quantity, so as not to irritate the stomach and cause spreading of the ulcer. This plan of treatment has been objected to as being unnecessarily severe, but he had never seen a patient who had objected to it and he had never found a rectum that refused the injections, when carefully given. He had never had occasion to regret its adoption. In old cases the results are not so satisfactory, but they are not satisfactory by any method of treatment. The point made by Dr. Fuetterer is of great importance: that we should not forget the condition of the blood. In the treatment just referred to, he had not overlooked the condition of the blood, although he had laid greater stress upon rest than he had upon the condition of the blood. Dr. Fuetterer lays more stress upon feeding than he does upon the rest cure. The speaker's reliance was upon rest in bed and upon milk. Before the patient gets out of bed, he is put upon the old-fashioned Blaud's pill or some other form of iron. Under this plan of treatment, recovery is the rule. Dr. Shattuck of Boston, after reviewing all the various methods of treatment, came to the conclusion that this method of rest, with rectal feeding, gave the best results, and that the tendency to relapse was less by it than by any other. This tendency to relapse, which has been referred to by Dr. Fuetterer, is most discouraging, and in any system of treatment the liability to relapse is to be considered. The best method of treatment, to put into a few words, in all cases of uncomplicated ulcer of the stomach, is to stop all food from going into the stomach

including water, then to put the patient to bed and feed him by the rectum for the first few days. After this, gradually give him food by the mouth and then give iron, and, only after a number of days when the patient has regained a good proportion of hemoglobin and of his strength, to allow him to eat ordinary food. He, like the essayist, advocated operative treatment in cicatricial obstruction of the pylorus. His own opinion was that early operation offers the best hope of relief. He also thought that early operation might prevent the occurrence of carcinoma.

DR. G. FUETTERER—The feeding is a very important part of the treatment. The plan he adopted is one that can be carried out by a trained nurse or any intelligent person of the household. He begins at 7 a. m. with an enema of a pint of warm water; if retained, it quenches thirst, and if not retained, acts as a cleansing douche. Then at 8, 12, 4, 8, and at midnight, he gives a nutritive enema, consisting of a dram of somatose, one egg, and a pint of milk, to which is added a pinch of salt. The patient is instructed to retain the enema and is assisted by the nurse. These injections are continued for 6, 10, or 15 days, or until the nausea and vomiting have all disappeared; then they can be cut down gradually, as feeding by the mouth is resumed. Occasionally an enema of warm water is given to relieve the thirst. For the relief of pain, he used, as Dr. Shattuck had recommended, small doses of morphin given hypodermically, which also accomplishes a good purpose in overcoming the annoying thirst, and quieting the movements of the stomach.

GASTRIC HYPERESTHESIA AND ITS MANAGEMENT.*

CHARLES G. STOCKTON, M.D.
BUFFALO, N. Y.

The term gastric hyperesthesia has been applied to painful or distressing sensations arising in the functionating stomach, not so intense as gastralgia, but of enough severity to cause more or less discomfort to the patient. If we analyze the causes of these distressing sensations, it will be found that they depend upon various pathologic conditions. Unquestionably the term "hyperesthesia" is often improperly used. The truest use of the term is when it is applied to sensory states analogous to cutaneous hyperesthesia, so often seen in the neurotic. There is a comparatively large class of cases to which I have gradually come to apply this term. It is important that this class of cases should be distinctly understood, as the conspicuous sensory symptoms so much attract the attention of patients and physicians that there is often established a course of treatment for indigestion that really does not exist. The patients of whom I speak present symptoms that resemble those of hyperchlorhydria, and yet the conditions are not identical. Nevertheless the symptomatology is sufficiently alike to render it impossible to make a diagnosis without examining the gastric chemistry. There is commonly distress after eating, often occurring earlier than in hyperchlorhydria, also eructions of gas, and sometimes water-brash. There is often tenderness over the epigastrium, and a sensation of vague distress after meals that leads the patient to eat sparingly, hence there is loss of flesh and strength.

The examination of the stomach contents of these cases reveals the fact that the standard of hydrochloric acid is not above the normal; indeed, it is often below that seen in active individuals in good health, and still it is apparently the hydrochloric acid and the activity of the gastric digestion that causes the distress of the patient. This is shown to be true by the relief of the patient attending the use of remedies that lessen the gastric acidity and slow the digestion, and similar, though less marked benefit, follows the selection of a diet of easily digested food. If these statements be critically examined it will be seen that the claim is virtually made that people without hyperchlorhydria have symptoms of that condition. This, in fact, is very nearly a correct statement of the case.

The systematic examination of the stomach contents of many cases during the past fifteen years has led me to the conclusion that there is no fixed standard of activity of gastric digestion and of the amount of free hydrochloric acid that is present in presumably healthy people. It depends for the most part upon the general strength and activity of an individual at a given time. It has long been known that the acidity of the gastric contents of the dog is so high that it would be unbearable in the stomach of man, and so, hardy workers in the north woods have gastric secretions that enable them to easily digest foods that are for most people indigestible—and this they do by means of a gastric secretion that is very active and highly acid. I have seen such individuals free from all stomach symptoms, with free hydrochloric acid ranging from .15 to .25, and a total acidity of over 100. Such gastric chemistry would prove to be very uncomfortable to the average student or brain worker. He is more comfortable with free hydrochlorie acid not above .10, and this moderate strength of free hydrochloric acid and the proportionate lowered gastric activity will be found too active—the free hydrochloric acid in too great proportion for comfort—in the stomachs of delicate females whose nervous systems are hypersensitive, and whose organisms are not properly developed by outdoor life and physical exercise. Such people are often made comfortable by lowering the gastric acidity to a point indicated by .05, and occasionally we find patients showing manifestations of hyperesthesia who are uncomfortable so long as there is a trace of free acid in the stomach and whose symptoms can be relieved when free acid is present, by the administration of alkalies and antacids, and by diluting the stomach contents with fluids. On the other hand, if one, guided by the indications of gastric chemistry alone, regards these cases as instances of hypochlorhydria, and attempts relief by giving hydrochloric acid and drugs of a stimulating character, the symptoms are at once aggravated.

It has seemed to me that the question of hyperchlorhydria must not be looked at too definitely. It is arbitrary and unphysiological to make a standard and say that above this is hyperchlorhydria, and another standard and say that below that is hypochlorhydria, without introducing the personal factor of the patient. What is hyperchlorhydria in one person woud be hypochlorhydria for another. It is possible in most cases of hyperesthesia to increase gradually the tolerance of the stomach for free hydrochloric acid and for a higher gastric activity in general, merely by improving the general health of the patient; that is to say, increasing his energy, his muscular and nervous activity. It is none the less necessary to resort to examinations of the stomach contents, and this should be done sufficiently often to make one familiar with the gastric secretion; then, by diet and treatment, the gastric activity should be kept at the highest point compatible with comfortable digestion, and yet within the limit of gastric tolerance. In this way can the stomach be developed, while the courage and resisting power of the patient are growing.

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In order to succeed in understanding these cases one must exclude inflammatory conditions, ulcer, erosions, food stagnation, and other conditions that might give rise to the symptoms. Gastroptosis can not be excluded, as that is a frequent cause of hyperesthesia. After having made the exclusions possible, it will be found that a large number of cases that present symptoms that closely resemble hyperchlorhydria can be explained by looking at them from the standpoint here taken, and managing their diet and drugs accordingly.

As a diet it is best to select, in the beginning, one that is very bland; for instance, milk or some milk preparation. To this should be added, first, the digestible farinaceous foods, then eggs; finally, meat juice at certain meals, and later scraped meat, meat powder, and next tender steak or chop, to which may be added some of the more easily digested vegetables. Thus, the diet may be gradually increased from step to step, always being careful not to go beyond the point of toleration. When found that the allowance has been too liberal (or in case it is found necessary even with a very restricted diet), and the stomach reacts unpleasantly, it is advisable in order to relieve symptoms to give after meals antacids as soon as evidences of irritation arise. Mixtures containing sodium bicarbonate, magnesium carbonate and the bismuth and strontium salts are commonly employed. The patient who may require these remedies regularly when busy as a school teacher, dressmaker, accountant or business man, may find that the digestion is comfortable without remedies, provided a vacation is taken, or a period of rest is arranged for after each meal. When the case is of long standing, it will be found that electricity is of signal service. The continuous current should be employed with gastric electrode, the negative pole in the stomach, and a current of from 5 to 10 milliamperes, of a low voltage, should be used two or three times a week for a period of five minutes. I have sometimes seen great benefit from the faradic current used in the same way. Unquestionably benefit may be had from hydrothepray, but great care must be taken not to overdo the use of cold water. A very brief, cold spinal douche, the temperature carefully regulated, or the shower bath with the same qualifications, or the Scotch douche, are measures that can hardly be dispensed with when treating this condition as it occurs in the neurasthenic. When met with in the hysterical, great benefit follows the use of the mistura asafetida introduced per rectum, in doses of one ounce night and morning. It is necessary, however, to attend to the strength of the gastric chemistry while continuing the other measures.

It may be said that the cases to which I refer are not typical instances of gastric hyperesthesia. In reply I would say that it depends entirely upon one's conception of hyperesthesia. I have come to regard these as making up the largest class of patients to whom the term properly belongs. That the treatment is rational and suited to the condition seems apparent, for the reason that we have to deal with those in whom those distressing sensations develop in the stomach merely from the normal stimulus of food and digestion. Indeed, as has been stated, the symptoms arise when the stimulus is less than normal. It is, therefore, proper to regard these cases as instances of hyperesthesia. I am firmly convinced that there exists a misconception regarding the nature of many individuals thus affected, and that they are treated for diseases of digestion of which they are innocent.

In closing, I wish once more to insist upon the importance of the regular examinations of the stomach contents, in order that one may govern the diet intelligently. There is such a thing possible as keeping a patient too long upon a very restricted diet, and the stomach instead of gaining in power, loses quite in the same way that the biceps atrophies for the want of use. And yet, if one is too ambitious and overtaxes the stomach in these hyperesthetic cases, there is produced in the patient real suffering, loss of courage and a disinclination to take sufficient food. I regard this as one of the most practical questions relating to the so-called dyspeptic. It is probably the most frequently met with of any of the gastric disturbances. It is a mistake to regard it as a disease of the stomach; it really is a derangement of the organism of which the stomach condition may be taken as an index.

DISCUSSION.

DR. W. W. TOMPKINS, Charleston, W. Va.—In these abnormal gastric conditions, we can not always diagnose between catarrh, ulcer, and carcinoma. He had in mind the case of a patient, who, eleven years ago, had stomach disorder and who was brought to a large medical center where a distinguished specialist had given a written opinion that the patient was suffering from cancer. The patient refused operation, returned home, and is living and well to-day. The speaker had been uncertain in his diagnosis at the time, but had come to the conclusion since then that it was a case of gastric ulcer and not cancer. The diagnosis on the basis of probability would be gastric ulcer in a young female; in persons who are gluttonous at the table, it would be gastric catarrh; but in advanced middle age, it would be gastric cancer. In many cases the diagnosis is uncertain and we are in the dark. One speaker referred to cases cured in two or three weeks; his own experience, however, was that these patients do not get well in a few weeks. He wished to put himself on record as opposed to putting these patients in the hands of the surgeon. He considered it a crime to operate in all cases and the physician who sends his patients to a surgeon for operation is *particeps criminis*. He tried to keep his patients from thinking of an operation. Many cases do not need it and are better without it. The essayist spoke against prepared foods and explains a rather troublesome process to get the beef juice; but the speaker could see no objection to using a good article of commercial beef juice. With regard to the medicinal treatment, iron had been mentioned, but he preferred arsenic in the form of Fowler's solution. He also used deodorized tincture of opium in small doses with advantage.

DR. C. JONSSON, Clinton, Iowa, found it often almost impossible to differentiate between ulcer and carcinoma or neurosis of the stomach, but any of those conditions were accompanied by pain and he considers the pain as an important factor in producing malnutrition of the body in general and deficiency of hemoglobin. He finds it necessary to use an anodyne such as codein, hyoscyamus, or cannabis indica in sufficient doses to relieve the pain. The nutrition of the body will improve as a consequence and the treatment will often produce a cure.

DR. HEINRICH STERN, New York City—The administration of hydrochloric acid for the amelioration of hypochlorhydria and kindred anomalies depending to their greatest extent upon systemic malnutrition, although universally recommended, is certainly an irrational proceeding. The moment the clinician becomes better acquainted with the production of gastric hydrochloric acid, he will cease to prescribe it for gastric insufficiencies and disorders. Hydrochloric acid is by no means a product of the peptic glands as generally supposed. The hydrogen or the chlorin of the hydrochloric acid of the gastric juice must certainly be derived from the blood. The acid as such does not occur in the blood nor in the lymph. The component elements must therefore combine somewhere in the peptic glands. We find in the blood free hydrogen-ions; however, they occur in small quantities only. If the nutriment is absolutely devoid of chlorin, and if the saliva is as much as possible prevented from admixing with the food and from entering into the stomach, no hydrochloric acid can be produced in the peptic glands. This fact convinces that it is the hydro-

gen-ion of the hydrochloric acid which must be derived from the blood. The place where the hydrogen-ions combine with the chlorin-ions to form hydrochloric acid can not be the gland-cell, but must be the glandular wall. The latter is a semi-permeable membrane, which prevents passage of the free chlorin-ions, but permits on the other hand the migration of the hydrogen-ions through the membrane. The production of hydrochloric acid can not ensue without a certain stimulus. The latter is supplied by the presence of free chlorin-ions on the inner surface of the stomach wall. The administration of hydrochloric acid, it is true, may furnish such a stimulus; however, for this purpose, it is at present not prescribed at all.

DR. MARY MCCOY, Duluth—The physicians as a rule pay too little attention to the preparation of the food of patients. It is a matter of vast importance to every physician. If chlorotic patients come for treatment, you can take it for granted that if they are allowed to take improper food and indulge in every wish they will have gastric ulcer. It is therefore of very great importance that physicians should be competent to direct the proper food and its proper preparation. Let us, for illustration, take up the common advice to a patient to use cereals as an article of diet. Most patients only boil a cereal, like oatmeal, for twenty minutes, when it should be cooked at least five hours. There is too much of a tendency on the part of physicians to rely upon the patients or their friends to prepare proper articles of food. Every physician should make a special study of dietetics. The combination of food also has much to do with the causation of gastric ulcer and other stomach disorders.

DR. THOMAS MCCRAE, Baltimore—In the clinic of Dr. Osler a series of cases of gastric disorder had been studied which were of interest in relation to the papers that had just been read. It was found that the diminution of hydrochloric acid in the secretion of the stomach, to almost, or entire anacidity, not only simulated gastric hyperesthesia, but also hyperchlorhydria. Experience had shown that the administration of hydrochloric acid was not helpful, but frequently detrimental, in these cases. The question of diet is a very important one. Treatment by drugs is often not of much use. Pain and increased sensitiveness, however, should be relieved. He recommended the following formula in gastric hyperesthesia: Acid carbolici and tinctura iodi āā m. i, glycerini 3ss; to be taken when required, to relieve pain.

DR. DORA GREENE WILSON, Kansas City—In her experience with gastric ulcer, she had found that there were many cases associated with a catarrhal condition of the stomach. In such cases she had found much benefit from hydrochloric acid given in broken doses, five minims of the dilute acid to be given after each meal, and then five drops more half an hour later. This prevents fermentation and aids digestion. The results are very satisfactory when given in this way.

DR. BOARDMAN REED, Philadelphia—He was much pleased with the confirmation that Dr. Fuetterer had given from his experience of the ill effects of hydrochloric acid when given indiscriminately. There had been no lesson impressed upon him more strongly, by his clinical work, than that great harm can be done by this acid, when its administration is not based upon examination of the stomach contents, especially with persons having a normal amount of it in their gastric juice, and still more with those having an excess. Many cases of gastric disorder have been caused by HCl when prescribed without an examination of the stomach contents. It would be well if the term dyspepsia were to be abolished from our language; it means only "difficult digestion" or distress after eating, and is applied to a number of diseases, requiring widely different treatments. Some of the speakers have said that they did not see how HCl could cause increase of acid secretion from the gastric glands. A little experience with the burette would soon convince them. In cases of deficient secretion the administration of small doses will increase the activity of the glands. In cases of normal secretion, or of excessive secretion, it does much harm by causing irritation. He expressed admiration at the result reported by Dr. Fuetterer. The important observation that he had made as to the rôle which anemia exerts in the production of gastric ulcer, is novel and deserves attention, and the good effect of beef-juice in bringing about improvement is notable. In conjunction with rest in bed, it is of great value. Gastric hyperesthesia is a very important symptom in gastric disorders and calls for more attention than is ordinarily given to it. We can not lay too much stress upon the amount of hydrochloric acid present in the gastric secretion, in cases of gastric hyperesthesia. Some have an increased while others have a reduced percentage of it and the hyperesthesia is greatly increased by the administration of hydrochloric acid in the former class of cases.

DR. G. FUETTERER, Chicago, approved of the remarks of Dr. Herrick as to the value of rest in combination with the diet. In reply to Dr. Tompkins' statement about commercial meat juice, he said that his objection was that if given in equal quantities the expense would be too great; that it is not as reliable as the fresh preparation and that the comparative results do not give such an increase of hemoglobin as he had obtained from beef juice. As regards surgical interference in narrowing of the pyloric orifice from ulcer, it is no crime, and it is not criminal, to recommend gastro-pylorectomy in some cases of gastric ulcer, but on the contrary, the only humane method of relieving the patient and preventing death by starvation and the development of a carcinoma. The object in giving the beef juice is to increase the hemoglobin, since according to the views expressed in the paper the ulcer is caused by the lack of hemoglobin, and heals when the hemoglobin becomes normal. The suggestion as to the use of morphin is a very valuable one. As regards giving rest to the stomach, it is a question whether or not you do give rest to the stomach by stopping the food. The empty stomach may move as much as the stomach containing food. By giving morphin we can quiet the motion of the stomach as well as relieve the pain, and favor cicatrization.

With regard to Dr. Reed's paper the author had called attention to a very important point and that is that pepsin and hydrochloric acid should not be given indiscriminately, as they often are. He had also made another very important statement, which was that the administration of hydrochloric acid in achlorhydria not only has a transitory effect, but, in the course of time, it really brings about the restoration of the normal proportion of hydrochloric acid in the gastric secretion, which is of the highest importance. Dr. Osborne said it was a common mistake to treat cases of gastric hyperesthesia by restricting the diet, as if they were cases of dyspepsia, which they are not. Referring to Dr. Reed's paper he said that he could not understand how the administration of an acid could bring about an increase of an acid secretion. He thought the hydrochloric acid was useful in improving the general nutrition, and thus enabled the stomach to better perform its work.

DR. C. C. STOCKTON—In regard to Dr. Reed's paper, explain the fact how you may, there is a decided advantage in administering hydrochloric acid in cases where the acid is deficient. As regards Dr. Osborne's statement that the administration of the acid would not stimulate the gastric glands, so much as an alkali given before meals, he had tried the latter many times. While the observation may be true in animals, it was not true in his clinical experience, basing his remarks upon chemical tests and clinical cases; he withdraws the tube as early as possible, so that the presence of the tube will not increase the hydrochloric acid, and he found that the result was negative and that the alkali did not increase the acid secretion. The improvement of digestion after giving the HCl may be in part due to the effect upon the entire organism. He did not think that the mere administration of small doses of HCl would increase the gastric secretion, but its administration would give the stomach increased power to act. In regard to operative measures, he wanted to confirm the statement that it is wrong to allow a patient with decided obstruction from stricture at the pylorus to go without the relief to be obtained from operation. The statement with regard to morphin, that it is likely to lead to the formation of a habit, is a just criticism. He thought that hunger could be overcome by the use of cocain, which, if properly used, would accomplish the same purpose with less harm. The fact remains that small doses of ano-

dynes abolish stomach movement and pain. He had been much pleased by the remarks made by Dr. McCoy who said that the physician should devote more attention to the preparation of food. He had no doubt that many of the gastric conditions that we are called upon to treat are caused by abominable cooking. Even in the preparation of bread, we see a great many failures in the homes of our patients. It is surprising that our mortality is not greater when we reflect upon the unintelligent preparation of food all around us. As to the remark of Dr. McCrae, he would state that his own experience with gastric hyperesthesia was that pain and hyperesthesia have accompanied deficient secretion of HCl; the pain is not always increased by taking food, it comes on paroxysmally and is a distinct neurosis. Although it is accompanied by this disturbance or absence of secretion, he believed that the most intractable cases of gastralgia are those in which the gastric secretion is perfectly *nil*; but these cases are not due to atrophy of the gastric tubules, because he had seen some in which the secretions were afterwards restored. Another speaker referred to the use of hydrochloric acid after taking food in order to prevent fermentation. It is a common mistake to attribute the symptoms of pain or distress to fermentation in the stomach. Most of the prescriptions for indigestion are based upon the idea that the disorder is caused by fermentation; but his own observation had lead him to conclude that it was due to disturbed innervation, or motility, and resulting disturbance of secretion. Most of these cases are based upon some disturbance of the nervous system, and they may be treated with hydrochloric acid without benefit until that condition is removed. Distension of the stomach that is complained of, is more often a sensation of distension rather than actual distension. He asked that in cases of supposed fermentation an examination of the stomach contents be made to find out if organic acids are present or not.

STATE SUPERVISION OF MARRIAGE.*

W. H. HEATH, M.D.
OF THE DEPARTMENT OF HEALTH.
BUFFALO, N. Y.

No time need be occupied before this audience in demonstrating that marriage is the foundation and keystone of family and state integrity, or that it is the most fundamental institution of society. Nor that the family is the natural and historic basis of it, being the origin of order, law, morality, education and justice.

Neither need time be taken to show that indiscriminate union is associated with the gravest consequences, the influence of which, either directly or indirectly, is associated with the most gigantic evils, in fact with almost every offense against society and the state. It loosens the family ties, tends to immorality, and diminishes mutual and parental responsibility.

From data in the premises, exact knowledge, we are in a position now to assign to heredity its proper importance, and to coincidentally formulate some plan or procedure having for its object such practical supervision of the whole question as will minimize and ultimately eradicate the possibility of evil influence through it. There can be no question of the right as to the necessity of the state to exercise its jurisdiction in this field as in others affecting the public welfare. To preserve itself it must be strong, and its strength depends upon its future citizens and their characteristics. Heredity, the imprint of sexual union upon its product, is one of nature's fundamental, universal, immutable laws. As you breed, so shall you reap, or beget. How important, therefore, and really how imperative is it that there be scrutiny and supervision, or attention given in some way over those who propose to send forth others into the world; this must be done to prevent not only the individual degenerate, but to protect society and the state from his possibilities.

As a matter of fact, the state, to a limited degree, already asserts this right and authority, though chiefly as to certain degrees of consanguinity, by no means the most important feature. It should go further and extend this to moral, economic and other factors, with established or proven unfavorable possibilities. The state having this right in the premises, it would appear that now is the auspicious time to inaugurate a change. Never before were the people more in the spirit of advance. The influence of the great discoveries and innovations in commerce, art and science have been educational in no small degree, and have prepared the public for many changes which an era ago would not have been considered. The struggle for life is growing keener, survival of the fittest more and more in evidence, the standard in everything made higher, and coincidentally with and as a result of this there is an enormous augmentation of the submerged mass. Any change, therefore, that would diminish the number bound to sink, the number who by endowment can not cope with life that confronts them to-day and that will improve with environment, is indicated. It can not, therefore, be doubted that supervision to any degree that will make the masses stronger where weak, better where in fault, will, as soon as demonstrated, command the attention it deserves.

The problem, however, is one of the greatest difficulty, dealing as it does with a custom or procedure as old as man himself. Into the problem enter both sexes, under complex conditions, prompted by the greatest emotions and the strongest passions, and that, too, at a time of life when these factors are at their highest and when reason and judgment are yet unripe.

As a step toward reform it is proposed that no marriage be performed, be legal, or the offspring thereof be legal, if the marriage be performed without license; that marriage by license be mandatory by law upon all persons entering into the matter, the contracting parties, the officiating person and the witnesses. This license should be issued by the proper authority or official, only after certain conditions have been complied with and certain data furnished (analogous in some ways to the procedure adopted in issuing a burial permit in properly organized health departments). Such license should be issued upon certain data, contained in three certificates, viz:

A. *Certificate of Health and Heredity.*—This should be furnished by the family physician, or in the absence of such, by any reputable physician. It should contain certain data covering the family history, such as: 1, age and cause of death of immediately preceding ancestors; 2, the existence of predisposition to insanity, tuberculosis, cancer or other transmissible diseases; 3, of any preceding illness bearing upon present or future health.

B. *Certificate, Either Special, Qualifying or Educational.*—This certificate should be issued upon, and represent attendance—with or without final examination—upon a short, practical common-sense course of free lectures; these to be given preferably at night, delivered under the auspices of the municipality, town or village, at some convenient place such as the high school, academy, court room, church lecture room, etc., by a suitably qualified person—matron for the females, master for males. These courses should be adapted to each sex, and

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should include in a general way didactic instruction, and when indicated and practicable, should be supplemented by demonstrations in the following subjects: 1, outlines of physiology of infancy, childhood, puberty; 2, function of sex, sexual life, its care and abuse; masturbation, menstruation, childbirth, reproduction, growth and development; 3, personal hygiene, physical and mental development; 4, venereal disease, and those due to violation of sexual laws; 5, domestic and household economy, domestic hygiene and sanitation; 6, alcoholism and tobacco, and 7, morality and the moral sense. The scope could be determined by a committee of educators, composed say, of a school principal, a medical man, a lawyer, or some prominent citizen. These lectures should be modified, greater emphasis being given to that which relates respectively to each sex, and include additionally such other pertinent matter as will be conducive to good citizenship, enlightenment in civic affairs, and a high moral standard.

C. *Certificate of Ability.*—1, Evidence of capability of support, that the parties themselves and their offspring will not be a care upon the community; 2, evidence that the individual is not an habitual criminal, when such evidence seems to be indicated.

A change in the mode of procedure of such a momentous matter as marriage must of necessity, in the present state of affairs, be gradual. Real knowledge in the premises is limited to the thinking classes. Public opinion is unformed, and therefore legislative action toward this end is impracticable.

To demonstrate the feasibility and beneficial results of state supervision upon some such lines as indicated, and create public sentiment, *some inducement should be made* for those contemplating marriage to comply with the conditions and to inaugurate such a system. As an inducement certain civic advantages might be offered:

1. To contracting parties themselves.—To male contracting party there might be given, *a*, limited state military service; *b*, limited jury service; *c*, a certain number of advantageous counts in civil service examinations for public services, the fire and police departments, clerical positions, etc.

To female contracting parties there might be given, *a*, a certain number of advantageous counts in civil service examinations for the public services, as in schools, hospitals or other municipal work; *b*, privilege to vote for school boards and other minor officers.

To both the right might be given that if overtaken by adversity increased assistance from the poor department will be given them.

2. To their children.—The offspring of such unions, as a result of selective breeding, may be assumed to be capable of greater development and possibilities, and therefore of greater value to the state. To these some preferment might be accorded, much in the same lines, such as, *a*, state military exemption, or preference in promotion in that; *b*, civil service counts and preferment in police and fire departments, clerical positions; *c*, certain free scholarships when practicable.

It is proposed that for the present this special license be voluntary, because under those conditions it appeals to the individual. It need not influence the marriage of others who for reasons of their own do not desire to avail themselves of its benefits; for those the ordinary license system can be used.

The benefits to be accrued from this special license system, if carried out, are not difficult to appreciate. These especially appeal to the writer: It would throw out safeguards around the young and indiscreet, and protect womanhood against designing men; dignify and elevate the marriage ceremony; deter the vicious; educate all classes to the fact that it is a serious step and not to be undertaken lightly; enhance the status of marriage and the married state; diminish divorce; insure a higher type of progeny; diminish hereditary disease; abolish predisposition to many other diseases; improve the public health and diminish mortality; increase morality; strengthen the state, and finally, pave the way to precede some other needed reforms of a similar nature.

Objections there will be. There are to every innovation, and this will be no exception. Prominent will be the objection that it interferes with a matter ordinarily guided by instinct and sentiment, and materializes it. Then again, the difficulty of enforcing it will be brought forward. The latter is a valid objection. There would be great difficulty, but not if the system were approached gradually and if it extended throughout all the states. Another possible objection is that any qualification to marriage will be conducive to immorality. My answer is that it be by special license, optional not mandatory.

Those who prefer can be married under ordinary license. It may also be objected that statements would be falsified. To that it can be answered that all statements should be under oath, with penalty, and that the special license be optional. Further, that publicity to private matters might be a consequence. That, however, would not be true were the licensing official under court orders and the records not public. Information to the family physician is privileged communication by law.

Aside from these radical, far-reaching reforms it would greatly strengthen the moral framework if there were a revision of marriage laws, to the effect that the limit of age be increased; that the ceremony always take place in the presence of witnesses; that it be given publicity; that marriage between intoxicated persons be forbidden, and that it be invalid if the ceremony be performed after 10 p. m.

While it may not be expedient to attempt legislative action at once, it does seem clearly in the province of this great association to discuss and to agitate the question in all its bearings. It should present it to the public in a rational, scientific, practical, everyday manner, clarifying it of ambiguity and showing its great value and significance.

DISCUSSION.

DR. SENECA EGBERT, Philadelphia—It seems to me that we are not ready for such an innovation as this would mean, for the reason that the great mass of the public is not educated to it and that must come first. My experience, as a physician, as well as a teacher of hygiene, in the last twelve years has been that the great majority of humanity, even in our centers of population like the great cities, are virtually ignorant of the matters to which this subject pertains, and that it is largely through the lack of education, through the unwillingness of parents to instruct offspring and through the lack of opportunities for education in this matter that things are as they are. Now, it seems to me that to offer such a proposition as this paper suggests and to give it state authority or state sanction without a very considerable preliminary education in regard to these matters relating to sex and marriage, would be to create so much opposition that it would wreck it in the very beginning and retard the movement. The idea is unquestionably all right, theoretically, but the opposition that would arise among the public in general, it seems to me, would be so great that it would throw the movement back and prevent its development rather than help it, and for that reason I feel that we in this country—at least I know a part of the country

—are not ready for it. If I am not mistaken, there has been a proposition in this very state; a law has been offered in the Minnesota legislature to require a physical examination or a physician's certificate as a preliminary to all marriages. I do feel that I know of no locality in the country where the general education of the people and their general knowledge is not such that a measure of this kind would develop a serious opposition to rather than a general and sustaining acceptance of its requirements.

Some of the suggestions made in the paper were to my mind excellent. It seems to me that there could be no better thing offered to the public at large than these lectures, for instance, that the Doctor mentioned and suggested; but we must remember that to give a course of lectures as suggested would require a very large amount of time, say a course running through an entire winter, and though I doubt whether one series of lectures would be sufficient in which to give the public such information as they ought to receive, my experience has been that the ordinary laity are not willing to attend any series of lectures that necessitates more than six or eight different meetings. However, there is no doubt that such education would be excellent. Again, while I believe that some of the people are anxious for education in these matters, I doubt whether we will secure it best by giving lectures with state or municipal sanction. I think it will go better and quicker through private sources, and when I say private sources, I mean sources distinct from the state or the municipalities, for instance. There is a feeling that the state should not go too far in interference with the rights of an individual. Many of us have a feeling that no state and no society has a right to contravene certain of our rights. Therefore, it seems to me that for any state to establish rules to regulate this matter at the present time will lead to a worse condition of affairs than there is at present. It would lead to a disastrous condition of affairs, because people who felt that their individual rights were transgressed upon and who were not willing to follow out the requirements of such state enactments would be induced to oppose them, and there would be a worse condition of affairs than there is at the present time. There is not a particle of question about the advisability of selected marriages, but we have a great many million people in this country and, for a long time to come the marriage will be a matter of simple emotion or notion, and so I think we will have to put up with the present dangers and risks and evils until we can build up from the bottom with that education which is going to be the primary motive power that will bring about in the future such action as is outlined in this excellent paper. If it only comes soon I shall be glad.

DR. L. H. MONTGOMERY, Chicago—While we are all individually at least in favor of the steps advanced by the author, it would come under the head of being called unconstitutional. There is a good deal to be said in favor of it, but there are a few objections to it. As sanitarians, the theory sounds very plausible and the most desirable thing in every respect, but to obtain such practical results it does not seem that this is to be in the very immediate future.

DR. L. B. TUCKERMAN, Cleveland—The beauty about all these schemes for regulating the question of marriage by education of the character spoken of is that they appeal to those to whom no appeal is necessary, and, to those to whom they ought to appeal, considerations of this kind do not appeal in any way whatever, nor can they be made to appeal. The thoughtful men and women of the industrial classes are already limiting marriage to a very great extent: Hon. Carroll D. Wright has collected some statistics recently of over 17,000 of men of influence locally among the trades unions in some twenty-two cities, and out of that 17,000 there were 15,000 and over unmarried—7 out of 8. Very evidently those 15,000 did not need any caution on the question of marriage. They were the more thoughtful among their associates and the simple fact of the uncertainty of their employment, the question of whether their job of $1.50 a day would hold during their married life, made them abstain from marriage, and there is enough regulation of that kind among those who think. Those classes of industrial workers are not marrying to any great extent. That relegates the marriage question among the masses of the population to those who do not do any thinking, but simply follow a physical impulse and for those who do not do any thinking, what use is there of undertaking such educational work!

DR. F. C. VALENTINE, New York City—The state has no right to infringe upon the inborn privileges of individuals. Is it an inborn privilege of mine to take an axe and drive you all out of this room? Not at all. Yet, the possessor of a residual gonorrhea may kill the woman he marries and may cause the state to be loaded with charges, children gone blind from the gonorrhea which was transferred to an innocent woman. Of syphilis I need not speak. Eloquent men have discussed that matter thousands of years ago when they promised that the sins of the fathers would descend to the third and fourth generation. We can not, it is quite true, as long as our present, perhaps theoretically the best, form of government exists, limit the rights of the individual, and especially in this one regard. But as long as we can quarantine cholera or smallpox or scarlet fever so well, I think the state is entitled to quarantine the two diseases that kill more than all others put together. In August of last year, Neisser of Breslau, at the Congress for Venereal Diseases in Brussels, showed that gonorrhea was a disease second in frequency only to the measles. He showed it from carefully made statistics, and yet in this country we make no effort to protect the public from the devastation of this one disease. It is quite true that the committee which last year here reported on the subject of marriage of gonorrheics were practically ruled off the floor because venereal ailments are not reportable diseases. But there can be enacted laws, through your influence, which will make marriage impossible without a certificate from a qualified physician that the would-be husband is free from gonorrhea and syphilis. You say that is a very difficult and complicated task? I agree with you, until we are educated in the matter. But is it not far more difficult and complicated for the state to support blind paupers, grown blind in consequence of gonorrhea? Is it not a fact that 80 per cent. of the children born with eyesight and who went blind within forty-eight hours after their birth, lost their sight on account of gonorrhea? Is it not true that 80 per cent. of the women who died of diseases of the reproductive organs, died from gonorrhea acquired innocently from their husbands, who imagined that they were cured? Now, I do not think that all men are selfish, but I do consider ourselves the weaker sex, because no woman, I think, would intentionally marry if she could communicate any disease. Men do it through ignorance and through weakness. I therefore think it behooves this Association, and particularly this Section, to make known to the legislatures the really easy manner in which one who has suffered from gonorrhea can be examined to decide whether he is free from the disease. This subject is entirely too wide a one for any five minutes' discussion. As you well know, however, it may be treated. There are other men who will continually bring up this subject before the Section, until eventually something is done about it.

INJURIES OF THE CHOROID, WITH REPORT OF CASE.*

ELLET ORRIN SISSON, M.D.
KEOKUK, IOWA.

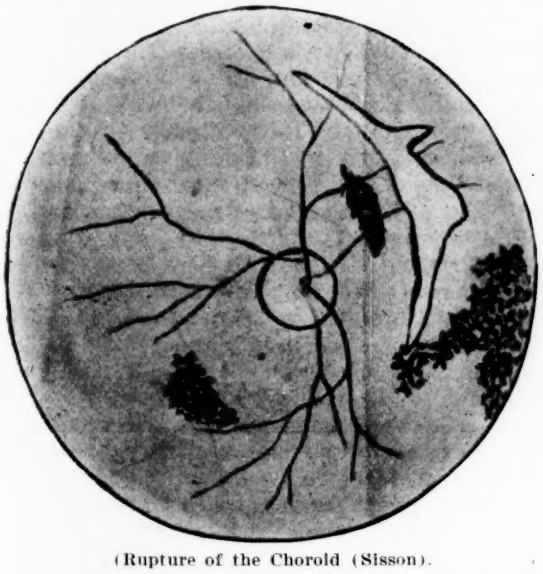
Injuries of choroid per se, with the exception of rupture, are so rarely seen, in fact it is so nearly impossible for them to take place without involvement of other ocular structures, that they can simply be alluded to as a possible occurrence. Small foreign bodies may pierce the sclerotic or the cornea and lens, and lodge in the choroid, and can often be detected there with the ophthalmoscope, and incised wounds of the sclerotic very frequently involve the choroid to a greater or less extent.

* Read at the Fifty-second Annual Meeting of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee of the Section: Drs. J. A. Lippincott, Casey A. Wood and H. V. Würdemann.

Hemorrhage into the choroid and retina may produce extensive changes in these membranes and impair the sight materially if the macular region is affected. Oliver[1] reports an interesting case where a boy was struck in the eye with a stone. Shortly after the injury both choroidal and retinal hemorrhages were detected. Later pigmentary and atrophic changes took place and vision was reduced to 20/40.

The most common injury, as previously stated, is rupture, the result of a contusion or a direct compression of the eyeball as a consequence of a shock, that has been imparted to the orbital or the peri-orbital bones by a blunt body, and this is very often complicated by a rupture of the external layer of the retina. In the great majority of such cases this solution of continuity of the choroidal tissues is usually single and is situated between the optic disc and macula lutea, very rarely to the nasal side. Cases of double, triple and even quadruple rupture have been seen and reported byTeillair, Fage and others.

The case that I have to report, while in the main similar to the majority, presents some peculiarities. In the first place, the rupture, which was an extensive one, was



(Rupture of the Chorold (Sisson).

to the nasal side of the papilla; secondly, the case was complicated by a spinal lesion in the lumbar region, which was said to have existed since the patient was 3 years of age. The visual disturbances were very great. The case was taken into the courts, and the questions that had to be considered were: Was the blindness the result of the injury to the choroid or the spinal lesion? Was the patient a malingerer?

T. D., age 16; May 15, 1897. Patient received a blow on the right eye from a rock thrown by a motorneer. When called, found an extensive cut in the soft tissues, covering the superciliary ridge; great swelling and ecchymosis of the lids. A further examination revealed the presence of a foreign body in the cornea, which upon removal proved to be a small piece of stone. Instilled atropin, prescribed an antiseptic wash and ordered patient put to bed. He made an uneventful recovery.

On Oct. 4, 1897, patient presented himself at my office for examination, saying that since the injury he had been almost totally blind in the eye. In the meantime he had sued the company for a large sum of money. At this time the following history was obtained. When 3 years of age, patient fell and broke his back, and has had to walk with a crutch ever since. An examination revealed the following: There was a visible angular deformity in the lumbar region of the spine, motor paralysis of the left leg and both patellar reflexes were absent. He did not remember of ever having suffered any pain at any time. An examination of the eye showed the following conditions: V. of R. E., 2.5/200; V. of L. E.. 20/15. Field of vision in R. E. was very much contracted. Pupil was of medium size, responding only to strong artificial light. A small rent existed in the lower part of the circumference of the iris. Only a very slight opacity was seen on the cornea at the spot where the foreign body had lodged. The ophthalmoscope revealed the following: To the nasal side of the optic papilla, about three papilla-diameters, and extending in a curved direction, the concavity directed towards the papilla, there was a rupture of the choroid, about four papilla-diameters in length, at the upper and lower extremities, and on either side of the rupture there were large deposits of pigment. The central part of the rupture was perfectly white, and the blood vessels could not be traced over it, showing that there had also been a rupture of the retina. The nerve head was grayish. Ophthalmoscopic appearance of left eye was normal. The usual tests showed that the patient was not a malingerer.

December 11, 1897, condition same. Patient complained of pains in the head at intervals.

January 13, 1900, V. R. E., fingers at 6 inches; L. E., 20/15. Palpebral and bulbar conjunctiva both eyes slightly injected. T was — in both eyes. Ophthalmoscopic appearance of right eye, same.

January 16, 1900, patient came to office complaining of the right side of the face paining and burning him, which he said had not existed previous to the injury. Condition of the eyes same. This was the last time patient presented himself.

These are the variety of cases that are most puzzling and upon the medical expert's opinion may hang the decision. As to just what influence, if any, was exerted by the spinal lesion is a question. We are told that in those much rarer cases of organic injury to the spinal cord, or of myelitis, or of hemorrhage in, or inflammation of its membranes, following on railway and other accidents, organic eye disease seldom results. As regards optic neuritis and optic atrophy, which used to be held as frequent consequences of spinal injuries, Thorburn[2] states that the slight spinal injuries are very common, but there is no evidence that they tend to be followed by changes in the optic disc. Such injuries are, however, in rare cases followed by chronic meningitis and myelitis, and in the latter condition there is *a priori* probability or possibility that optic neuritis may supervene.

Page[3] says there is no evidence of pathological change in the optic nerves being common in cases of spinal injury and nervous shock. Albutt[4] found hyperemia of the optic papilla with some indistinctness of its margins and overfilling of the retinal vessels, but no optic atrophy, nor tendency of the condition to pass into optic atrophy, and referred the changes he found to secondary, subacute meningitis at the base of the brain. It is now well-nigh a quarter of a century since Albutt published these views, and little or no confirmation of them has since appeared; yet even Albutt did not see optic atrophy as the result of spinal injury. In the case reported it is hardly possible that the loss of vision was the result of pre-existing spinal lesion.

The author presents this clinical picture for what it is worth, fully realizing, as stated in the outset, that the injury itself presented no very striking peculiarities, but the complications and the medicolegal aspect of the case make it of interest to the practicing specialist.

BIBLIOGRAPHY.

1. Norris and Oliver's System of Diseases of the Eye, vol. iii, p. 692.

2. A Contribution to the Surgery of the Spinal Cord, London, 1889, p. 178.

3. Railway Injuries in Their Medicolegal and Clinical Aspects, London, 1891, p. 43.

4. On the Use of the Ophthalmoscope, London, 1871, p. 197.

A NEW COMBINED ELECTRO-CAUTERY INCISOR FOR THE BOTTINI OPERATION FOR PROSTATIC OBSTRUCTION.

HUGH H. YOUNG, M.D.
Head of the Department of Genito-Urinary Surgery, Johns Hopkins Hospital Dispensary.
BALTIMORE, MD.

Although the electro-cautery operation was brought out by Bottini as far back as 1876, it was not generally adopted until 1897, when Freudenberg presented to the profession a greatly improved instrument, and followed it up by numerous convincing articles. During the past four years this operation has been performed very extensively, and we are now in a position to stop a moment, look over our results, and discuss the shortcomings of the operation, as well as its merits.

Freudenberg's large collection of operated cases probably shows very accurately the value of the procedure. The statistics are as follows: 752 cases, in which the result was good in 86½ per cent., a failure in 7½ per cent., and the mortality between 4 and 6 per cent.

These figures, if correct, undoubtedly show much better results than can be claimed for any other operative procedure. Castration, while peculiarly effective in a certain class of cases, has been woefully unsatisfactory as a routine procedure, and has justly been relegated to the list of operations historically interesting, but practically valueless.

Prostatectomy thoroughly performed is undoubtedly an operation of great value. There is no question that the statistics as to the value of this operation are entirely misleading, for many reasons; principally because in most of the recorded cases (and in all until recently) the operation was entirely inadequate—merely a nipping off of the most evident intravesical projections, leaving the equally important parts of compression in the deep urethra untouched. There is no question, however, that a thorough removal of the entire gland, which can generally be easily accomplished by enucleation with the finger, is a very successful operation, and entirely satisfactory when perfectly accomplished.

There are, however, several varieties of prostate which are unsuitable for this operation, principally the small and the sclerotic varieties. This, however, is not the principal objection, but the fact that in the majority of instances we are confronted with patients too old and too feeble to safely undergo the shock of a satisfactory prostatectomy. It is for just this class of cases that the Bottini operation has proved such a blessing, and has achieved really wonderful results. On account of the success of the cautery operations in the otherwise hopeless cases, it has become more and more the question whether it should not become the method of choice in all manner of cases. Since there are, however, a certain number of failures (10 per cent. or more) and a certain mortality (between 5 and 8 per cent.) shown by the Bottini operation, it still remains questionable whether it should replace prostatectomy, especially in younger patients. To settle this point more extended investigation is necessary. It also behooves us to study the causes of failure and fatality in the Bottini operation, with a view of finding means of obviating both as far as possible.

Among the causes of death besides uremia, shock, sepsis, etc. (presumably unavoidable), we find recorded several not unavoidable reasons, principally from improperly placed or too lengthy incisions. In the first category are deaths from the cautery blade burning its way into the rectum, due, as has been shown by Freudenberg, to the fact that the beak of the instrument became caught in a postureteral pouch, which is separated by only a short space from the rectum. In the same class are those fatal cases in which the entirely useless anterior cut was made and penetrated (as might have been expected) into the space of Retzius. In the second category are a number of cases in which the operator has rashly made his incisions too long, resulting in the rupture of the urethra in front of the prostate, and sometimes fatal hemorrhage from division of perineal vessels.

The statement of certain writers that incisions of 4.5, 5 or 6 cm. in length were often necessary to remove the obstruction is absolutely without pathological substantiation, and undoubtedly liable to lead to a great many serious blunders in the profession. Very rarely, even in the very largest hypertrophies, should an incision over 3.5 or 4 cm. be made, first because it is unnecessary, and secondly because it is dangerous. Deaths from any of the causes outlined above are preventable, and should in the future be eliminated from the statistics.

In Freudenberg's statistics, after excluding the fatal cases (4.2 per cent), we find 92 per cent. improved, 55 per cent. cured, 37 per cent. definitely improved, and 8 per cent. failures. Why should there not be a greater uniformity of results? Is the operative technique, or the instrument at fault? Turning to the instrument, we find the one of Freudenberg much preferable to that of Bottini, as has been very frequently pointed out. But there are several very evident weaknesses in even the former instrument. In the first place, since there is the greatest difference as to size, shape and condition among hypertrophied prostates, it is unreasonable to expect one single cautery blade to be suitable for all. An incision which is sufficiently deep for a medium-sized hypertrophy may be wholly inadequate for a very large one, and positively dangerous for the small fibroid forms. Then, again, one lobe is often very greatly enlarged while another is only slightly so. Are we, then, to give each the same depth of cautery incision? I have in my collection of autopsy specimens several prostates with small but very obstructive middle lobe enlargements, where the ordinary Freudenberg and Bottini instruments would have penetrated beyond the capsule and perhaps into the rectum.

It is very evident, then, that an instrument with several easily interchangeable blades of graded sizes would be a decided improvement.

There are two other defects in Freudenberg's apparatus which, while apparently trivial, are of considerable importance. The first is in the shape of the beak of the instrument as now constructed. The traction necessary to hold the beak up against the prostate during an operation will often pull it into the urethra. This is due to the fact that the beak meets the shaft at such a wide angle (or at such a slope—see Fig. 7) that even moderate traction causes it to ride over a median bar (for example) and slip into the prostatic urethra. The dangers of this accident are not small. Indeed, it has occurred several times, and has been responsible for several deaths, the cause being division of the membranous urethra, extravasation, hemorrhage, etc. In order to be certain that the beak of the instrument is against the prostate, and has not slipped into the urethra, Freudenberg has wisely advised that a finger be inserted into the rectum to determine its location before an incision is begun.

I have carefully followed this practice for the past two years, and have thus prevented several accidents, for in numerous instances have I found that a little steady traction (as in an operation) would draw the beak into the urethra. But this safeguard is not always sufficiently accurate, for while it is comparatively easy to feel the tip of the instrument turned downward toward the trigone, one can not often feel the beak with sufficient certainty when the instrument is turned to make a lateral cut, as one of my own cases demonstrated to my sorrow. (Freudenberg's instrument was being used.) The forefinger of the right hand was inserted into the rectum, and the tip of the beak definitely located to be in the bladder. The rotation was made for a lateral cut, and with the finger still in the rectum

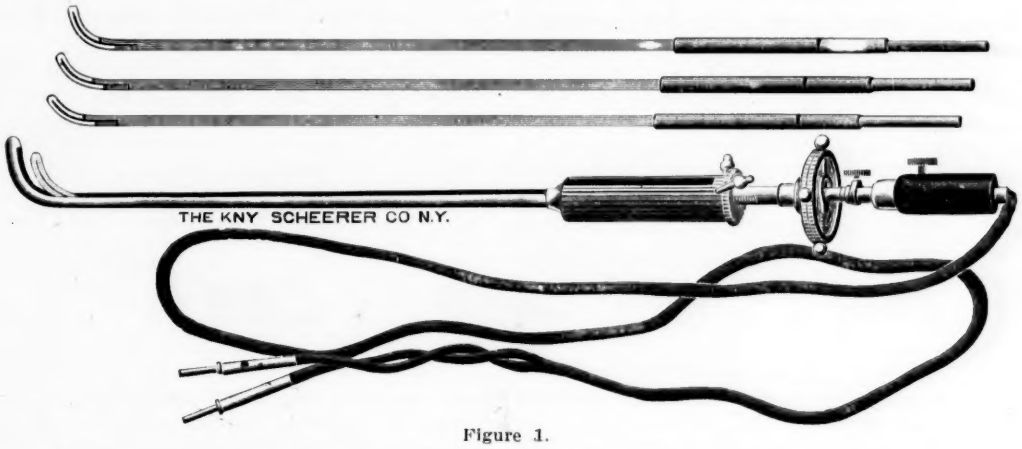


Figure 1.

traction put upon the instrument to draw the beak up snugly against the prostate. The beak was not felt to slip into the urethra, but before beginning the cautery incision another careful examination with the finger (which was kept in the rectum during the entire operation) was made and did not reveal any slipping of the beak. Despite all these precautions (which happened to be unusually carefully taken in this case) an incision of 3.5 cm. was followed by a gush of blood from the

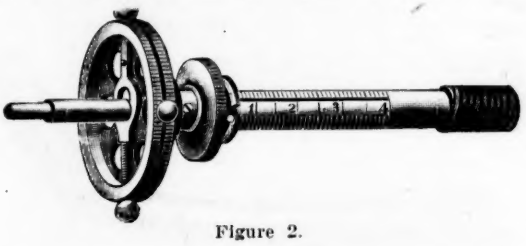


Figure 2.

meatus, and a perineal section done under cocain revealed a ruptured membranous urethra, and extravasated blood behind the triangular ligament. A timely operation saved his life, but it brought very forcibly to my mind the *need of a beak which would not slip into the urethra,* one more nearly at right angles to the shaft.

The other defect, at times quite disagreeable, was that the handle of the instrument would often become so greatly heated as to burn the hand of the operator, and sometimes to prevent his turning the contact screw to break the electrical current. Examination soon showed that this was due to bad contact. This connection was made by a flat surface coming against a cylinder, resulting in a linear contact, insufficient to conduct the high current necessary to heat the instrument without itself getting hot. This defect, while merely one of mechanical construction and easily remediable by bringing broader areas into contact, was one which frequently led to great trouble both on account of the heating of the handle and the insufficiency of the electrical current which reached the cautery knife.

Recognizing more and more during two years' work with Freudenberg's instrument the drawbacks referred to, and especially, feeling the need of blades of different size, the writer finally consulted the Kny-Scheerer Co. of New York,[1] during April, 1901, with reference to the construction of an instrument which would, if possible, fill all the requirements. After considerable experimentation we have produced, we believe, a satisfactory instrument, the construction of which is thoroughly explained by the accompanying cuts.

As seen in the illustrations, the form of Freudenberg's instrument is adhered to (Fig. 1), the only changes being in its having four interchangeable blades, a beak of different angle, a connecting handle with more extensive contact surfaces, and a few minor changes in construction. By a very simple device, the simple elevation of a sliding bar on the rotary wheel, one blade may be removed and another inserted (Figs. 2 and 3). The sliding bar working on a spring holds the rod containing a blade firmly attached to the screw mechanism by engaging the circular groove near its outer end (Fig. 4). We have had four blades constructed as shown in Fig. 5. The smallest having an elevation of .8 cm., the second 1.2 cm., the third 1.7 cm., and the fourth 2.1 cm.

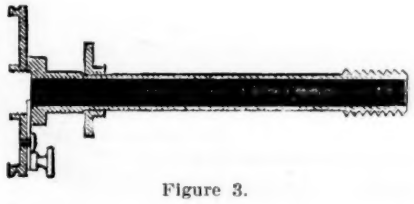


Figure 3.

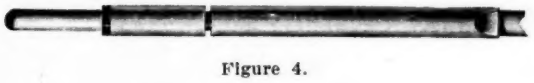


Figure 4.

Blade No. 3 corresponds to the one usually found in Freudenberg's instrument, and is the one most generally used, while No. 2 is useful in small hypertrophies, and No. 4 for the very large. Blade No. 1 (the smallest) was constructed mainly to complete the set, and with-

1. My thanks are due to Mr. Charles Farner, mechanician, for valuable help.

out any idea of much practical value. I have been surprised, however, to find it very useful in several cases, which will be given in detail further on.

The change in the shape of the beak has been of very great comfort. The new beak (Fig. 6) can not possibly slip by the prostatic orifice into the urethra with all the outward traction which may be put upon the instrument during the operation, whereas with the Freudenberg instrument (Fig. 7) one must be constantly on his guard lest this occur. The right-angled character of the beak does not make it any harder to introduce, in fact it seems to ride over a high median bar with greater ease, having more the shape of a prostatic catheter.

The changes made in the attachment handle of the conducting cable, as shown in the diagrams, consists merely in bringing larger surfaces in closer contact. These have completely done away with the disagreeable overheating of the contact screw, which constantly occurred before.

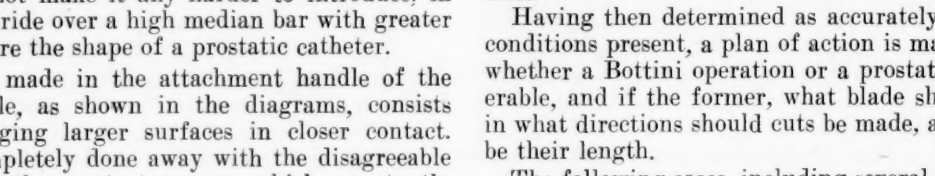


Figure 5.

During the past five months I have used this instrument on sixteen cases, and have amply proved it to be practical, and one, I think, that has overcome many of the defects to be found in Freudenberg's instrument.

We will give in abstract a few illustrative cases, but before doing so it may be well to state the measures we take to determine before operation the size, shape and character of the prostatic enlargement, and consequent selection of the blade to be used, and the length of the cuts.

Besides a systematic general physical examination,

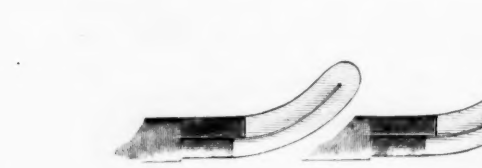


Figure 6.

noting particularly the condition of the arteries, a very careful local examination is made as follows: *Rectal examination,* noting: the size, shape and consistence of the prostate; the relative enlargement of the two lobes, the thickness of the prostate as revealed by the finger in the rectum, and a sound in the urethra (determining in this way the thickness of the hypertrophy in the median portion); the adnexa of the prostate, vesicles, glands, rectal mucosa, etc. *Bladder examination:* 1, with catheter, noting the location, depth and character of prostatic obstruction, with residual urine, the capacity of the bladder and its tonicity; 2, with the cystoscope, noting: (a) the size, shape, location and character of intravesical prostatic hypertrophy (especially as to the condition of the median portion, whether a bar or a rounded or pedunculated lobe, and its elevation above the trigone (bas fond); the relative enlargement of the lateral lobes, etc.; (b) the condition of the bladder wall, as to trabeculation, pouch formation, diverticula, inflammation, ulcers, calculi, etc. 3. With searchers (in absence of a cystoscope), which by rotary movements may determine quite accurately the presence of a middle lobe; and the relative size of the lateral lobes, as also the presence of trabeculations, pouches, etc. *Urinary examination;* especially with reference to the character of the infection, besides the ordinary tests.

Having then determined as accurately as possible the conditions present, a plan of action is mapped out: as to whether a Bottini operation or a prostatectomy be preferable, and if the former, what blade should be chosen, in what directions should cuts be made, and what should be their length.

The following cases, including several forms of hypertrophy, give in detail the operation found applicable to each and the length of blade chosen. They demonstrate, I think, the *raison d'être* of the new combined cautery incisor, and its practical value. The work with this instrument being of recent date unfortunately prevents our showing the ultimate result obtainable, as several months must generally elapse before the full effects of the operation are secured.

CASE 1.—J. N. M., aged 71, had been suffering with urinary trouble for 4 or 5 years. During this time urination became steadily more difficult and more frequent until he now voids every one and one-half hours, night and day.

Examination showed slight, but definite, enlargement of the prostate, which was much harder than normal, but not nodular. The cystoscope showed a small median transverse bar and a

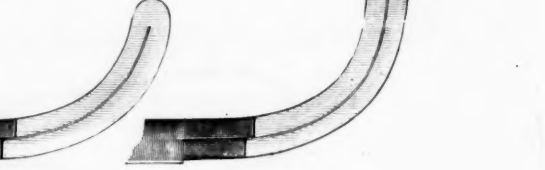
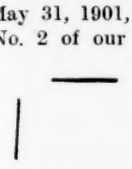


Figure 7.

slight intravesical projection from the lateral lobes, but there was really very slight intravesical enlargement of the prostate. With a finger in the rectum a very slight increase in thickness over the normal was felt between it and the instrument in the prostatic urethra. The bladder, however, showed very definite effects of obstruction, viz., considerable trabeculation and pouch formation, a residual urine of 90 c.c., and a capacity of only 250 c.c. *Remark:* We evidently had to deal with the so-called small sclerotic prostate, furnishing moderate but definite obstruction and a bladder hypertrophied and somewhat contracted. The very slight enlargement and the small amount of prostatic tissue beneath the urethra made us afraid to use Freudenberg's instrument. A thorough prostatectomy would have been impossible, and as the case appeared to be in need of the Bottini operation, we persuaded the patient to wait until the arrival of our new incisor, so that we might use a smaller blade.

On May 31, 1901, a Bottini operation was performed with blade No. 2 of our instrument, which blade seemed to suit the case exactly. Three cuts were made: one posterior, 2 cm. long; and two lateral, the right 2.5 cm., the left 3 cm., at right angles to the posterior (see diagram). The instrument was used at a high heat; time, about 1 cm. to the minute; the operation done under control of a finger in the rectum. It was evident that a larger blade would probably have cut through the posterior capsule of the prostate.



The convalescence of the patient was as usual: difficult urination for the first few days and after that a gradual improvement. The ultimate result was a complete relief of prostatic obstruction, micturition free, residual urine nil.

CASE 2.—F. E. B., aged 34, presented himself on June 30, 1901, complaining of bladder trouble. The patient had had nocturnal incontinence of urine up to the age of 14, and after that he always voided urine much too often. Seven years ago cystitis developed, and a calculus was discovered and removed by suprapubic cystotomy. The fistula did not heal till eight months afterward, and cystitis has persisted ever since. On admission he passed his urine about 6 times a day, generally with pain referred to the neck of the bladder.

Examination.—Patient was a rather neurotic young man. The urine was cloudy, acid and contained phosphates, pus cells and bacilli. The prostate examined by rectum was slightly enlarged, considerably indurated at the upper end of each lobe. The seminal vesicles were both indurated and closely bound to the upper end of the prostate. The fluid expressed from the prostate and the vesicles by massage shows pus cells. A rubber catheter was passed into the bladder, but met some constriction of the prostatic orifice. The patient had just voided, but a residual urine of 220 c.c. was found. The bladder capacity was 500 c.c. The cystoscope showed a marked trabeculation of the bladder wall, a considerable thickening of the interureteral bar, and behind it a deep pouch in which was a considerable collection of sand and small calculi, white in color.

Examination of the prostatic orifice revealed a definite thickening of the median portion in the form of a transverse bar, and behind it a fairly deep bas fond. There was no intravesical enlargement of the lateral lobes, but the entire prostatic orifice was irregular and showed numerous granulations.

Remark.—Although the patient was a young man, he had unquestionably an enlargement of the median portion of the prostate, which was causing considerable obstruction to urination, as shown by the trabeculation and pouch formations in the bladder and the presence of 220 c.c. residual urine. The prostate was undoubtedly chronically inflamed, but the enlargement, while probably inflammatory in origin, was unquestionably causing trouble, and in our opinion demanded a Bottini operation. The prostate, however, was so small that it was out of the question to use the ordinary Freudenberg blade, so that patient was asked to wait until our instrument could be completed. In the meantime he was put upon bladder irrigations and given urotropin internally.

On Sept. 13, 1901, examination showed considerable improvement in his cystitis, but the urine was still purulent. There was still 220 c.c. of residual urine present. Cystoscopic examination showed an improvement in the inflammation of the mucous membrane, and much to our surprise the considerable mass of small calculi which was previously found had disappeared. A very careful search was made with the cystoscope, but no calculous deposit could be found anywhere. There was still present the definite transverse median bar with a pouch behind it, and the bladder wall was still trabeculated. Accordingly the Bottini operation was performed, using blade No. 1 and making a single posterior cut through the median bar 2 cm. in length. There was some hemorrhage following this cut. After the operation the patient experienced considerable discomfort for a few days, but since then his condition has continued to improve.

It was intended to make three short cuts (see diagram) through the median bar with the small blade, but a burning out of some of the electrical connections in the hospital after the first cut had been made prevented the others being made.

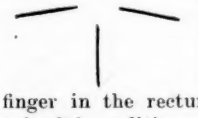
Now two months have elapsed since the operation, his condition is much improved and the residual has dropped to 150 c.c. Unless this disappears soon we shall make the two other cuts through the median bar as originally intended.

CASE 3.—G. T. H., age 73, admitted Sept. 9, 1901, complaining of prostatic hypertrophy and catheterism. Urinary difficulty began soon after the age of 50, but did not get severe until about 1 year ago, when micturition became quite difficult, and the patient had to get up two or three times at night to urinate. About 10 months ago he had to resort to a catheter, which he has used ever since, being unable to void any urine naturally. He has had several attacks of inflammation of the bladder, and both testicles have been the seat of abscesses during the last 6 months. He now catheterizes himself regularly three times a day, and suffers very little discomfort, but the passage of the instrument is often quite difficult.

Examination.—Strong, healthy-looking man, arteries slightly thickened, small nodules in both epididymes. Prostate markedly enlarged, about the size of a large orange, left lobe much larger than the right. The median furrow is deflected towards the right. The upper end of the prostate is hard to reach. The consistence is smooth, soft, not tender. Urine is acid 1014, not very cloudy; microscopically, numerous pus cells and bacilli.

Cystoscopic examination showed a very marked intravesical enlargement of the left lateral lobe, considerable enlargement of the median bar, and a lesser enlargement of the right lateral lobe, with a small rounded mass between the two lateral lobes in front. There was a very deep bas fond behind the prostate, and the bladder was very much trabeculated and inflamed. The blade of the Freudenberg instrument would have been perfectly suitable for this case.

A Bottini operation was done under chloroform, blade No. 3 being chosen. This blade is of the same size as Freudenberg's. The posterior cut was 3.25 cm. long, right lateral cut 3.25 cm. long, left lateral cut 3.5 cm. long (see diagram). The operation was done under the control of the finger in the rectum. Hemorrhage moderate and patient in splendid condition at end of operation; 1000 c.c. submammary infusion of salt solution was given as a prophylactic against uremia.



The patient made a rapid convalescence, required catheterization only three or four times after the operation, and very soon began to void urine naturally. His condition since then has steadily improved, until now the interval between urinations is every two hours during the day and longer at night. His general health has improved wonderfully, he has gained 12 pounds in two months, and will apparently get a good result.

CASE 4.—E. W. S., age 63, admitted Sept. 13, 1901, complaining of enlarged prostate catheterism. Urinary trouble began four years before with difficulty and frequency of urination, which at times had become so bad he had to use a catheter. For the past three months has had to use catheter three times a day, and has not been able to pass any urine naturally. For the last four years the patient has suffered from diabetes mellitus, which has been somewhat controlled by dieting.

Examination.—Large, healthy-looking man. The rectal examination showed a very large hypertrophied prostate, left lobe apparently larger than the right, consistence firm, but not nodular. Urine removed by catheter was acid, slightly cloudy, contained both albumin and sugar, and under the microscope showed pus cells and bacilli. After six days of diabetic diet there was barely a trace of it to be found. A rubber catheter entered the bladder with difficulty. The bladder tonicity was

only moderately good, and the capacity about 500 c.c. The cystoscope showed a marked intravesical enlargement of the left lateral lobe, which projected into the bladder as a large rounded tumor, a moderate enlargement of the median portion, and a very slight enlargement of the right lateral lobe. Behind the prostate was a very deep bas fond in which the ureters could not be seen. The bladder was considerably trabeculated and inflamed.

September 19, 1901, Bottini operation was made, under cocain and morphia. On account of the considerable size of the prostate, blade No. 3 was used, and as the left lateral lobe was much larger than the right, a much longer incision was made on that side. The posterior median cut was 3.5 cm. long, the left lateral 3.5 cm., and the right lateral 2.5 cm. (see diagram). Time taken, 1 cm. to 1 minute. Instrument was used at a white heat. There was very little hemorrhage following operation, and very little pain caused, the anesthetic being very efficient. Immediately after the operation the patient voided urine naturally, and has never been catheterized since. For the first few days there was considerable vesical spasm.

On Oct. 2, 1901, thirteen days after the operation, the following note was made: Patient now passes his urine about every two hours in a large stream and without pain. There is no dribbling; residual urine 140 c.c.; urine, acid, quite purulent, pus cells and cocci present. Sugar is still present in considerable amount.

In a letter dated Nov. 5, 1901, the patient reports that he had not used a catheter since operation, that he urinates once during night and four times during the day, that his residual urine is less than 50 c.c., that micturition is free, and the vesical inflammation greatly improved.

CASE 5.—J. P. A., age 71, was referred to me by Dr. Finney on Sept. 28, 1901. The patient gave a very long urinary history, which began with difficulty in micturition 11 years ago, when a stone was found and removed by a surgeon through a suprapubic opening. For two years following this he had a suprapubic fistula, which was finally cured by his taking up catheter life in 1895. Castration was then done by another surgeon, and several weeks later another suprapubic to remove another stone. During the next year the stones reformed and were crushed by a third surgeon. After that he was free from pain for a while, but had to use a catheter. Stones soon appeared again, and during the next twelve months four separate litholapaxies were done. In 1897 still another surgeon did a suprapubic operation and removed stones, and at the same time removed by means of the rongeur forceps a moderate-sized median lobe which was still present (despite the castration). After this operation, for the first time the patient was able to go without the use of the catheter, but micturition has been too frequent.

Status Presens.—Patient on admission complained of irritation of the bladder. He urinated every two hours during the day and twice during the night, but had no pain or discomfort during urination. Rectal examination: The outlines of the prostate were easily made out, and a little larger than normal. In the median line the prostate presented a slight but distinctly abnormal rounded mass. The lateral lobes were apparently much atrophied and sloped away from the central mass, which replaced the median groove and notch. The whole diameter of the prostate was half as large again as normal, the consistence of the lateral lobes soft and flabby. Urine was acid, 1022, containing pus cells, bacilli and cocci.

Cystoscopic examination: Rubber catheter met an obstruction about 7 inches from the meatus, but a silk one was passed with ease. Patient had just voided, but 320 c.c. of residual urine was found in the bladder. Cystoscope showed two fairly large stones in a pouch behind a considerably hypertrophied interureteral bar. The mucous membrane of the bladder was much inflamed, but not markedly trabeculated, and there were no ulcers to be seen. Examination of the prostatic orifice showed a small but definite transverse median bar behind which there was a shallow bas fond. There was no intravesical enlargement of the lateral lobes to be seen, and there were no sulci between the lateral lobes above, nor between them and the median bar.

Remark.—The castration had removed the enlargements of the lateral lobes, but the median lobe persisted, after that. The removal of this through a suprapubic opening allowed the patient to urinate without the use of a catheter, but there still remained a definite transverse bar at the median portion (the base of the middle lobe) which continued to act as an obstruction, 320 c.c. of urine remaining in the bladder after micturition. It was evident that after litholapaxy a Bottini operation should be done to remove this obstructing bar, but the amount of tissue felt beneath the instrument in the urethra was so slight that it was decided to use the smallest blade of the incisor.

On Oct. 17, 1901, under cocain and morphia, litholapaxy was done, and followed by a Bottini operation. The crushing and evacuation of the stone was easily accomplished after placing the patient in the Trendelenburg position. The largest stone was one inch in diameter. All fragments were sufficiently crushed at the first introduction of the lithotrite, to be removed by evacuation afterward. After all debris had been removed, the bladder was washed clean, cocain again inserted into the bladder and urethra, washed out after three minutes, and a Bottini operation performed. For this purpose blade No. 1, which in this case was 8 mm. high, was used. Three cuts were made through the median bar, each 1.5 cm. long, one cut being in the median line posteriorly, the other two cuts were made at angles of about 50 degrees to the median cut (see diagram). The operation was done with the forefinger of the right hand in the rectum pushing the prostatic bar into the angle of the beak of the instrument. This was done because it was feared that the length of the beak in the bladder would so depress the trigone and bar of the prostate that the knife would not penetrate it for its full depth.

The patient stood the operation well; anesthesia quite good; very little hemorrhage. He was unable to void his urine afterward, and had to be catheterized three times in the next 24 hours. When seen a week after the operation he was voiding urine quite freely and the residual had dropped from 320 to 150 c.c. and he was already feeling greatly improved. He attended his office on the fourth day after the operation.

Condition one month after operation: Steady improvement, residual now 125 c.c., sometimes more. Bladder is still large and weak in tone, but condition improving.

November 21, 1901, bladder capacity is 400 c.c., tonicity considerably improved; residual, however, 175 c.c.

CASE 6.—J. A. B., age 70, admitted Oct. 18, 1901, complaining of enlarged prostate and catheterism. His urinary trouble began ten years before with difficulty and frequency, which soon became so aggravated that he began the use of a catheter, which he has used continuously up to this time. For the past seven years he had been unable to void any urine naturally, and when admitted passed a catheter about every two hours during the day and about every three hours during the night, using a very large rubber catheter. Examination showed a very large, hard prostate and a considerable dilatation and lengthening of the urethra just in front of the prostate. The cystoscope revealed a moderate-sized stone in a pouch behind the prostate, and a very much inflamed and trabeculated bladder. There was present a considerable intravesical outgrowth of the prostate, which appeared as a collar-shaped enlargement, both lobes and the median portion being hypertrophied, the left projecting farthest into the bladder. Behind the median bar was a deep pouch. The bladder capacity was rather small. The urine, which was obtained always by catheter, contained many red blood-corpuscles, pus cells and bacilli, and was acid in reaction.

On Oct. 23, 1901, litholapaxy was done under chloroform. The operation was begun under cocain, but chloroform had to be used on account of pain. The largest diameter of stone

grasped by the instrument was 2 cm. The crushing and evacuation were both difficult on account of the great hemorrhage caused and the trabeculated condition of the bladder. Patient stood the operation well and was very much more comfortable afterwards, but still required catheterization.

On Oct. 26, 1901, a Bottini operation was done under cocain, 4 per cent., and a hypodermic of ¼ gr. of morphia. Blade No. 3 was chosen as the proper size for all of the cuts, of which three were made, one posterior through the median bar 2.75 cm. long, a right lateral 2.5 cm. long, left lateral 3 cm. (see diagram). The duration of cuts was about 1 cm. to 1 min. and a high heat was used on the blade. There was very little hemorrhage following the operation, and immediately afterward the patient voided urine.

Patient made a rapid convalescence, voiding his urine freely immediately after the operation and never after required catheterization, although he had led a catheter life for seven years.

On Nov. 7, 1901, 12 days after the operation, he reported that he was rapidly improving, that he passed his urine once every three hours without any straining and was free from pain. A catheter passed four weeks after operation finds no residual urine, and the cystitis considerably improved.

CASE 7.—J. M. D., age 73, admitted October, 1901, complaining of hypertrophy of the prostate and catheterism. Urinary trouble began about seven years ago with difficulty of urination. A little later retention of urine became complete. He then began to use a catheter, and has had to use it ever since, never being able to pass any urine. He has remained in fairly good health, has had very little inflammation of the bladder, and now has to pass a catheter about every four hours, twice during night. Increasing difficulty in introducing the instrument of late has driven him to the operation.

Examination.—Large, healthy-looking man, arteries slightly thickened, heart and lungs apparently normal. Small hydrocele of right side. Prostate very much enlarged, about the size of a moderate-sized orange, lateral lobes about equally enlarged, contour round, smooth, consistence hard. Seminal vesicles indurated, but not nodular. A rubber catheter met obstruction 9½ inches from meatus. The bladder capacity was 400 c.c., tonicity rather poor. Urine acid, slightly cloudy, and contained pus cells and bacilli. The cystoscope showed a very markedly trabeculated bladder with numerous small pouches. Behind the prostate was a very deep bas fond in which the ureters could not be seen. There was considerable inflammation of the mucous membrane. Both lateral lobes and the median portion were very much enlarged, presenting a large collar-shaped intravesical hypertrophy around the urethral orifice, which projected well out into the bladder cavity. Growing from the upper portion of the lateral lobes, especially the left, were numerous small villi, which floated in the fluid but caused no hemorrhage. There was no ulceration of the surface of the prostate.

October 28, 1901. Bottini operation, cocain and morphia. Blade No. 3 was chosen. Four cuts were made, one in the median line posteriorly across the median bar 3.25 cm. long, one right lateral cut 3 cm. long. Through the left lobe two cuts were made, one lower oblique at an angle of about 75 degrees to the median posterior cut 3.25 cm. long, and an upper oblique cut at an angle of about 130 degrees to the posterior median cut also 3.25 cm. long. The direction of these cuts is best shown in the accompanying diagram. Patient stood operation well. There was very little hemorrhage, and anesthesia was quite good. Time occupied was about 1 cm. to 1 min. For the first 24 hours after operation the patient voided urine with considerable ease, after that it became more difficult, the bladder becoming irritable and catheter had to be used for six days. After that patient began to void without the use of a catheter.

Condition three weeks after operation: Patient voids about every hour, but sometimes two and one-half hours elapse between urinations. The vesical inflammation is improving, and its capacity increasing gradually. The catheter on which he depended for seven years has not had to be used for two weeks.

On November 21, 230 c.c. of urine was voided at a time with an interval of two and a half hours. Urination was fairly free, stream large. Residual urine was 10 c.c.

December 13, patient voids urine about six times in 24 hours, in amounts varying from 150 to 210 c.c.

CASE 8.—S. M. A., age 56, admitted Oct. 28, 1901, complaining of frequency of urination. His prostatic trouble began two and a half years before with difficulty of urination. Since then micturition had become gradually more frequent and difficult, and one year before he had begun the occasional use of a catheter. On admission he complained of a dull pain at the beginning of urination, which occurred every two or three hours during night and day. He had suffered considerably with inflammation of the bladder.

On examination patient was found to be a man in fairly good health. The prostate on rectal examination was found to be slightly enlarged, soft in consistence, contour smooth and round, and both lobes of about the same size. The seminal vesicles were not indurated. The urine was cloudy, specific gravity 1017, pus cells and bacilli were present in considerable number. A rubber catheter passed with some difficulty, owing to obstruction in prostatic urethra. Residual urine 185 c.c. (another examination three weeks later showed a residual of 375 c.c.). The bladder capacity was between 500 and 600 c.c.; tonicity fair. Cystoscope showed a small median bar which joined, without intervening sulci, with two very slight intravesical enlargements of the lateral lobes. Behind this median bar was a definite, but not very deep, bas fond in which the ureters lay rather close up to the prostate. The interureteral bar was considerably enlarged and behind it was a rather deep pouch. The posterior wall of the bladder was very greatly trabeculated, and between some of these trabeculæ small round and oval openings were seen which connected with extravesical pouches. About 1 inch behind the left ureter a very considerable diverticulum with a large round opening into the bladder was seen, and the cystoscope was introduced into this for some distance, and a cystoscopic examination of the diverticulum made. With a finger in the rectum and the cystoscope in the urethra the amount of prostatic tissue between them was found to be very little thicker than normal; more than in Cases 2 and 5, but much less than usual in prostatic enlargements.

The rectal examination and cystoscopic examination both showed only a slight enlargement of the prostate, but the considerable residual urine and the marked evidences of obstruction as shown by the trabeculation and pouch formation in the bladder wall made it evident that there was considerable hindrance to urination. The prostate was so small that prostatectomy would have been very difficult, although the patient was in splendid shape for any operation, and the ordinary Freudenberg instrument would undoubtedly have been dangerous to use on account of the danger of penetrating the capsule of the prostate. Blade No. 2 of our instrument appeared to be the proper size to be used, with cuts not longer than 2 cm.

On Nov. 20, 1901, a Bottini operation was performed under cocain and morphia. Blade No. 2 was used in accordance with the cystoscopic and rectal examinations as stated above; five cuts were made as shown in the diagram. One median posterior and two oblique on each side, one at an angle of 75 degrees to the median posterior, and the other at an angle of 120 degrees. Each cut was made 2 cm. in length. Patient stood operation well. There was very little hemorrhage from the cautery cuts. The catheter was not required after the operation.

On the day following the operation there was a temporary suppression of urine, which was relieved by subcutaneous infusions and digitalis.

December 13, patient has done well. Urine is voided freely, often 300 c.c. at a time. Residual urine, 0. Cystitis is improving. Result is excellent.

SUMMARY.

Reviewing the eight cases reported in full above, we find four cases (3, 4, 6, 7) in which blade No. 3 was used. All of these were fairly large hypertrophies of both lateral lobes and median portion, and were suitable cases for Freudenberg's instrument.

In two cases (1 and 8) blade No. 2 was used. In both of these the prostate was very slightly larger than normal, as shown by rectal, instrumental and cystoscopic examinations, but in both of these cases there was

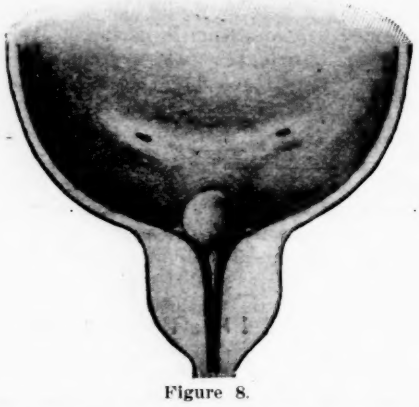


Figure 8.

marked evidence of obstruction and the cases urgently needed operation. In both cases, however, incisions made with Freudenberg's instrument would probably have penetrated beyond the confines of the prostate, but the operations were performed safely with blade No. 2 of our instrument.

In two cases (2 and 5) blade No. 1 was used. In both the obstruction was caused by a very small median bar, associated with complete atrophy of the lateral lobes (after castration) in one case and lobes of normal size in the other. In these cases the amount of tissue

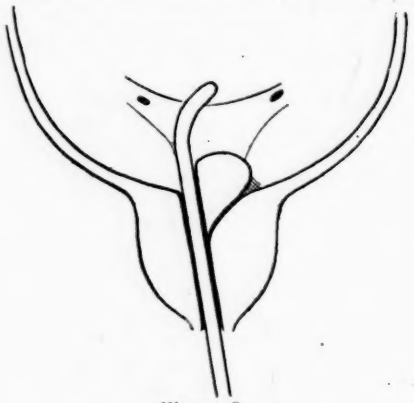


Figure 9.

beneath the instrument was so small that we feared to use even blade No. 2. In another case (not here reported) the enlargement consisted in two very large lateral lobes, associated with a complete absence of median bar, the urethra skirting the posterior surface of the prostate and the amount of tissue between the rectum and a sound in the prostatic urethra being very small. In this case we used blade No. 3 for the lateral lobes and blade No. 1 for the posterior cut.

I have not as yet used blade No. 4, and hardly think it will often be necessary except to attack a single very great hypertrophy of one lateral lobe. I have, however, seen several tremendous general hypertrophies in which it would have been necessary.

As to the efficacy of the Bottini operation, of which I was myself at first very skeptical, my experience (now of 41 operations) forces me to testify decidedly in its favor.

In 41 cases I have had 3 deaths, all men in very bad condition before operation, and 2 with pyonephrosis. Fifteen patients were over 70 years of age, 3 over 80, and among these there have been no deaths, and all but one have been cured of the prostatic obstruction. Of 13 patients who had to use the catheter, there is only one

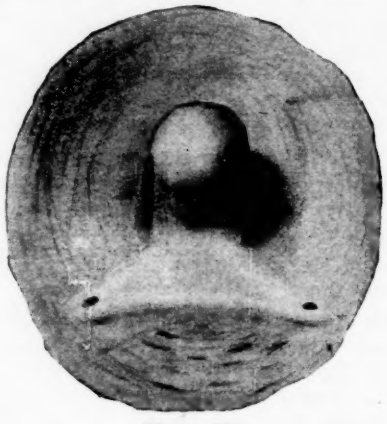


Figure 10.

who still requires it, and this one is considerably improved. Some of my cases are of too recent date to show the ultimate results, and these I will reserve for a later publication. I am still, however, of the opinion (from an experience of 15 prostatectomies) that in certain cases, *e. g.*, men between 45 and 60, in good condition, and with easily enucleable enlargements, a complete prostatectomy is a very safe operation, and certain as to lasting results, though I must say the effects of the

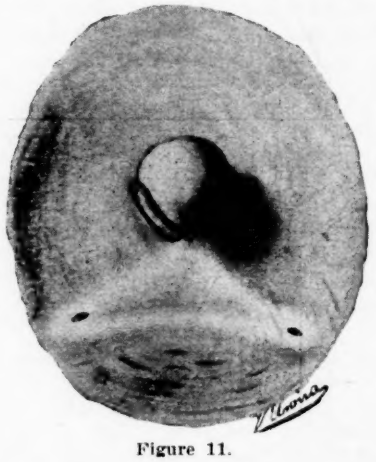


Figure 11.

Bottini operation seem to be also permanent. Time, careful study of cases (especially with the aid of the cystoscope) and long-continued observation after operation can alone determine the applicability and the limitations of the principal operations for the treatment of prostatic hypertrophy.

In closing the paper I can not too strongly urge that the Bottini operation should be performed in accordance with the character of the prostatic obstruction as found by exhaustive examination as previously outlined. There is no doubt but that a perfunctory performance of the operation with one blade for all cases, and one cut

directed posteriorly and one laterally on each side, while perfectly satisfactory in a large number of cases, is insufficient in some and dangerous in others.

As shown by the writer in another paper,[1] when a decided median lobe (more or less pedunculated) is present, the ordinary operation is entirely inadequate, as the posterior cut will generally pass to one side of the median lobe and leave it to continue its obstructive work—see Figs. 8, 9, 10.[2] If, however, the cuts be so made as to pass obliquely across the base on each side of this projecting lobe,[3] I have shown that this lobe may be dropped back out of the way (Fig. 13) and a rapid atrophy induced by thus cutting off most of its blood supply (as in diagrams, Figs. 11, 12, 13). This has been abundantly proved in five cases, some of which were entirely unaffected by the usual three incisions and the prostatic obstruction immediately removed by the incisions described above.

Figure 12.

Figure 13.

The cases outlined above serve to show the selection that may be made in some forms of hypertrophy as to the size of blade to use, and as to the length of incisions, their number and direction. No two cases are alike, and each should be a study unto itself.

As a rule the usual three incisions—one posterior and two lateral—are entirely sufficient for most cases; especially those of moderate hypertrophy, where with more incisions the danger of causing a slough, too large to be passed per urethram, is considerable. The same rule applies to middle lobe cases; unless the median enlargement is considerable the single posterior incision should be preferred as free from all chance of completely amputating the median lobe, and leaving it to act as a foreign body in the bladder.

In the choice as to the length of incision and the size of the blade to use there is considerable latitude and it should always be based on a careful study of the conditions present, and controlled by rectal touch.

1. Monatsberichte der Urologie, December, 1900.

2. To be more explicit: Fig. 8 shows the Y-shaped urethra, which is present in these middle lobe cases, and Fig. 9 shows how a metal instrument that has been introduced into the bladder will pass to one side the middle lobe, and not remain on top of it. Fig. 10 illustrates a case in which I performed the usual Bottini operation with no result, and a subsequent suprapubic cystotomy showed the posterior cut on one side of the middle lobe as shown in Fig. 10.

3. This is accomplished by the following maneuvers: introduce incisor, draw beak up against anterior portion of the prostatic orifice, rotate instrument 180° (hugging the prostatic orifice all the while). This will bring beak into sulcus to one side of middle lobe. Carry the rotation 45° further and beak will lie obliquely across the base of the middle lobe, ready for the first cut, Fig. 11. By reversing these movements the cut on other side of middle lobe may be similarly performed, and then the two lateral cuts made, Fig. 12. The result is shown in Fig. 13, a diagram from an autopsy specimen.

Prize for **Essay on Hypodermic Use of Morphin.**—Dr. J. B. Mattison, Medical Director of Brooklyn Home for Narcotic Inebriates, offers a prize of $400 for the best paper on the subject: "Does the Habitual Subdermic Use of Morphia Cause Organic Disease? If so, What?"

LICHEN PLANUS HYPERTROPHICUS.*

DAVID LIEBERTHAL, M.D.

Professor Dermatology, Illinois Medical College; Dermatologist to the Michael Reese Hospital and United Charities' Dispensaries.

CHICAGO.

There are a number of names for this affection: Lichen simplex chronicus circumscriptus; lichen verrucosus, lichen corneus, etc., most of which are appropriate to this morbid process. In the last two decades it has been the subject of lively discussion, inasmuch as some cases of this description do not yield to the administration of arsenic, others do not show any typical lichen papules, but only the verrucous patches are characteristic of this disease and hence there arises serious doubt whether in these cases we have really to deal with a true lichen-planus process or with an atypical form of mycosis fungoides—A. Neiser, Deutscher Dermatologen Congress, 1894—or with a lichenization of a localized pruritus in the sense of Brocq. Thus further, Kaposi has named cases of this appearance keratosis verrucosa papillaris.

Now, this question as to the identity of these with lichen planus has lately been answered in the affirmative, after consideration of their clinical and anatomic features.

In view of the rare occurrence of this form of lichen planus, I wish, in the course of my remarks, to cite cases which will partly illustrate the subject in question and besides bring out some pertinent points.

Symptoms.—The affection is characterized by rounded or bean-like, oblong, irregularly outlined plaques of a bluish-red, brownish-red or violet color. They are flat, warty elevations sharply defined and their surface bears numerous whitish, or grayish, bran-like, firmly adherent scales; besides, there are on the surface deep point-like and larger depressions into which horny plugs are implanted. The consistence of these lesions is quite firm and they are elevated to half an inch and free from hair. Neither spontaneously nor on pressure is pain felt, but there is severe itching and especially so on the site of the patches. Besides these, there are sometimes found brown pigmented spots and atrophied areas.

In certain of the cases typical lichen papules are seen in the neighborhood of the hypertrophied lesions, or on other parts of the body, besides corresponding lesions on the mucous membrane of the cheeks in the form of white nodules or tender white reticula. In other cases no elementary lesions whatever are found. The seat of the affection is, in the majority of cases, the anterior and, to a lesser degree, the lateral aspects of the tibia, and especially the middle third. Sometimes varicose veins are present. Inasmuch as the lesions show a tendency to aggregation and frequently a band-like arrangement in the direction of the long diameter of the limb, there may exist a relation to certain cutaneous nerves. Regionary glands are sometimes found to be enlarged.

This affection mostly occurs in males over 40 years of age. Its course may be very chronic. Thus, Lion describes a case of a female patient, 43 years of age, in whom it had existed since childhood, and showed besides the hypertrophied areas typical lichen papules. The diagnosis is not difficult for those who have seen a case, inasmuch as all the cases present much the same appearance.

Diagnosis.—It must be differentiated from the fol-

* Read at the Fifty-second Annual Meeting of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee of the Section: W. T. Corlett, L. Duncan Bulkley and W. L. Baum.

lowing conditions: Warts, which are more cleft and have no scales on the surface; tuberculosis verrucosa cutis, in which there is found an inflammatory halo and foci of pus accumulations; lichenoid eczema, which is never of so great extent; typical cases of mycosis fungoides, where there are other characteristic symptoms, even if the tuberous patches should not be broken down, or the atypical form of Bazin, in which the tumors developing without preceding manifestations (d'emblée) soon break down into putrid fungous areas; keloid, which is smooth and painful on pressure; the discs of the keratomatous stage of sarcomatosis cutis multiplex hemorrhagica, which show a depressed central portion and no scales; ichthyosis verrucosa, which dates from childhood and has a generalized distribution, and lupus hypertrophicus, where the affection dates from childhood, presents a red basis and in the neighborhood there appear brownish-red firm nodules deeply implanted in the skin.

Etiology.—The etiology of this affection is obscure. Although we observe in most cases an arrangement of the lesions corresponding somewhat to the course of the cutaneous nerves, there seems to be but slight probability of a nervous causation. The severe itching often present can be explained in the same way as in other inflammatory conditions. Inasmuch as it occurs chiefly on the lower limbs where the circulation is somewhat impeded, and more so in middle life, it would not be too much to suspect the changed lowered circulation in the locality of being an etiologic factor, especially when we further consider that in a large percentage of the cases considerably developed varicose veins are noted. In some cases, injury preceded the development of these warty growths.

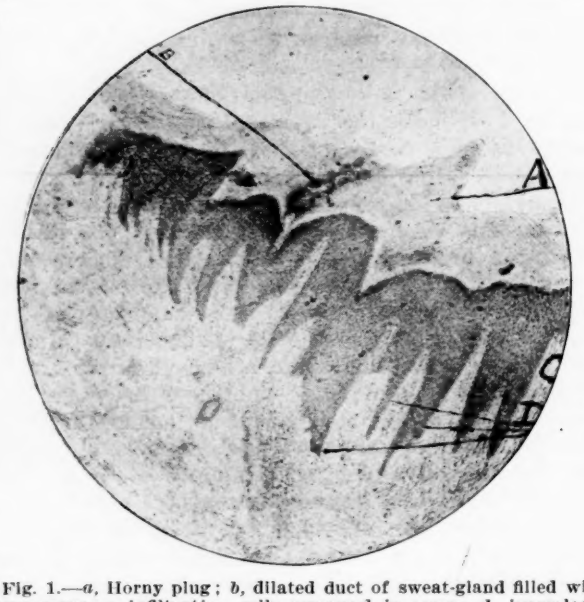


Fig. 1.—*a*, Horny plug; *b*, dilated duct of sweat-gland filled with horny mass; *c*, infiltration cells arranged in rows; *d*, irregularly shaped projections.

I shall describe the histopathology in connection with the microscopic findings of a specimen from *one* of my cases.

Prognosis.—The prognosis as regards the general health of the patient is favorable, although some patients suffer from intense itching, especially while they rest. This much can be said concerning the curability. Some of the cases have yielded readily to the administration of arsenic in the form of Asiatic pills; sometimes this combined with the local application of chrysarobin in traumaticin 10 per cent., or the latter alone. J. Schuetz reports good results in these cases from the local application of plastermull of mercury and arsenic. But there are other cases, where no other than surgical interference will produce results. In one of my cases a recurrence took place in spite of the total removal of the verrucous patches with the thermocautery. I am under the impression that those cases which present, besides the verrucous patches, typical lichen planus elements give better prospects in treatment than those where hypertrophic areas only are present, and especially so when the former are in larger distribution.

I wish at this juncture to report two cases which represented this affection.

CASE 1.—Male, aged 45, German, manufacturer. Father of four healthy children, and comes of healthy stock. He smokes considerably and drinks some beer; has had no venereal or skin disease and knows of none of his relatives being afflicted with such. About six years before presenting himself at my office he had an attack of rheumatism in his arms and legs, lasting about eight months. About a year later he commenced to suffer from severe itching, especially on the abdomen and extremities, and soon afterwards noticed pimples in these localities and about two years ago the lumps on his legs appeared. Different remedies were applied with varying results until his family physician referred him to me. On his first visit, August, 1900, I found the following condition: He was well built; of medium stature with a well-developed panniculus adiposus; of dark complexion with brown hair, blue eyes; body not very hairy; organs of chest and abdomen apparently normal, and no alteration in the nervous system. Urinalysis revealed nothing pathologic. As soon as the patient had undressed, he began vehemently to scratch himself, especially on the abdomen.

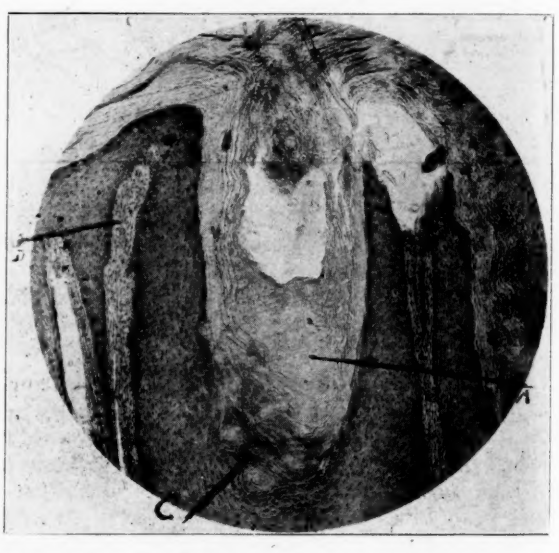


Fig. 2.—Arrangement of the infiltration cells in rows within the threadlike and elongated papilla. *a*, Horny plug; *b*, greatly broadened stratum granulosum; *c*, imperfect keratinization.

On the forearms, abdomen, penis, scrotum, sacral region and legs there were numerous, brownish, flat papules of polygonal outline and waxy appearance, solitary and in groups, with here and there larger lesions of more roundish outline and more bluish color, especially on the extensor surface over the wrists, and on the glans penis. On the anterior aspect of the right tibia, about its middle, was an irregular, oblong, warty patch about one inch long and three-fourths of an inch broad and corresponding with the direction of the tibia. Just below this was another roundish plaque of the size of a dime and in the line of prolongation of the first. On the anterior aspect of the left tibia, somewhat higher than the middle, was a node

of the size and shape of a bean. These were elevated about one-fourth of an inch above the skin level, and presented all the other features of lichen planus hypertrophicus, but were not very itchy.

Closely around these warty elevations were seen numerous typical lichen papules and also dark-brown, pigmented spots. These were also found on other affected parts. On the mucous membrane of the cheeks, which was the seat of leucoplacia, lichen planus symptoms could not be observed. The patient, not residing in the city, was referred back to his family physician with the diagnosis and the suggestion to administer Asiatic pills in increasing dose up to the time of noticeable improvement, and then to gradually decrease;; the local application of oleum cadinum 20 per cent., alternating with Unna's ointment of carbolic acid and corrosive sublimate, was also recommended.

In January, 1901, I saw the patient again. All the symptoms had disappeared, but there were areas of pigmentation at the sites of the former lesions and shallow depressions at the site of the verrucous patches. I advised the continuance of two pills daily for a few months. I regret that the patient would neither give his consent to have pictures taken, nor permit the excision of a portion for histologic examination.

CASE 2.—This patient presented quite different features. Male, American, 47 years old. Manager of a musical instrument establishment. Married and has three healthy children. His mother died at 30 from unknown cause. His father, who

Fig 3.—*a*, Horny plug; *b*, stratum granulosum broadened; *c*, elongated and broadened epithelial projection; *d*, infiltration.

is still living at 70 years of age, is in good health, but had a red scaly skin affection of the face a few years ago, which lasted about two months and then disappeared without leaving any trace. The patient at the age of 12 had swollen glands of the neck, and at 20 he had an attack of gonorrhea. He had no other venereal disease or other illness, but suffered a fracture of the distal portion of the right ulna.

He is of active temperament and regular habits. The present affection began about seven years ago, when he was quite an enthusiastic bicycle rider. Returning from an evening ride his legs began to itch considerably, to which he paid but little attention until a few days later, when they became reddened and swollen. He consulted a physician, who prescribed a soothing application. The swelling soon subsided, but the itching continued. He did not notice any pimples. He changed physicians frequently and used all sorts of advertised remedies, but without relief. On the contrary, he grew worse and scarcely a year after the first symptoms occurred, lumps appeared on the front of the lower limb, where all the former symptoms were. These increased gradually in number and size. The itching was always present and especially at night, when his scratching caused bleeding.

I saw the patient for the first time in April, 1897. He was rather tall, strongly built and with a moderately developed panniculus, had light complexion and blue eyes. Neither internal organs nor urine revealed anything abnormal. The entire skin, with the exception of that on the lower limbs, was normal, as was also the mucous membrane of the mouth and urethra. The anterior aspect of each tibia was the seat of bluish-red elevations, extending one-fourth of an inch upward, and from the size of a pea to that of a penny; they were sharply defined and had irregular outlines, with all the other characteristic signs of an hypertrophied lichen. There were seven on the right tibia, and four on the left. The lesions on both sides were arranged quite regularly one above the other. On top of these patches were roundish, bloody excoriations. There were no typical lichen papules visible near these agglomerations nor anywhere else. For nearly eleven months I tried in vain every conceivable internal and external medication. The itching was at times subdued, but there was no noticeable change in the eruption. In March, 1898, I removed these elevations with the thermocautery. When healing was nearly completed, he left the city and I did not see him until November, 1899, when he consulted me for an urticaria on the face, which lasted about two weeks and was probably due to glycosuria. The urine showed about one-fourth per cent. of glucose, but there was no acetone and under appropriate diet the glucose disappeared. At that time I incidentally inquired

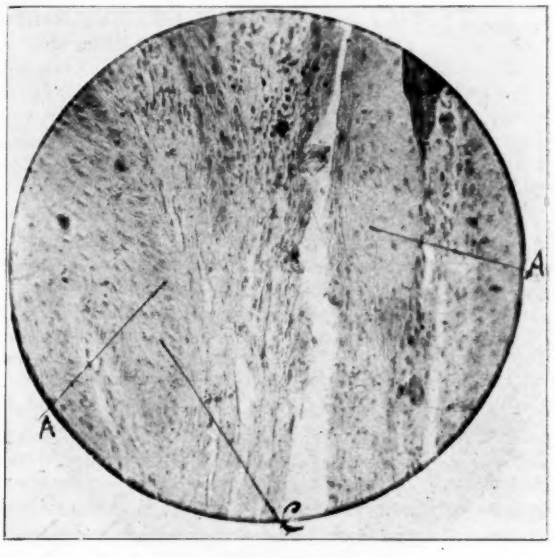


Fig. 4.—*a*, Dilated intercellular spaces, showing infiltration-cells *c*.

about his legs and learned that they were worse than ever before. On examination, I found that not only were the lesions previously removed, much larger, but there were also numerous other warty growths. On the inner side of the right tibia there was a plaque about the size of a quarter, where formerly there was one the size of a dime; it was irregular and had a hilus on its upper border. A few lines below was a roundish one the size of a dime. About one-third of an inch below this, on the site of six original lesions, was an oblong band-like plaque 2½ inches long and nearly 1 inch broad; its upper part resembled a mushroom and the whole plaque appeared like a longitudinal section of a moderately filled gut. About an inch below, was a lesion nearly the size of a dime. On the outer side of the right tibia were two lesions, one lobulated, about the size of a half-dollar, and about 2½ inches higher was the other, kidney-shaped and slightly larger than a nickel with a hilus on its upper side.

On the outer side of the left tibia near the crest there were two large patches, the upper resembling a four-leaved clover, the other like an inverted letter L. Midway between and just behind the two was a roundish one the size of a nickel. Below the left knee at the upper margin of the middle third of the tibia was a plaque the size of a dime. A year later, in November, 1900, I saw this patient again and the pictures here presented were taken. The lesions above described were all still

present besides new ones from the size of a pea to that of a dime, mostly situated in the neighborhood of the old plaques. These are marked N on the pictures. All the eruptions had irregular outlines, mostly segments of circles, indicating their origin from coalescence of roundish lesions. They were sharply defined, warty, raised about one-third of an inch with a gradually sloping periphery; they were of a grayish-violet color and presented bloody excoriations. They were beset with fine grayish-white, firmly adherent, bran-like scales and had holes or depressions from the size of a pin's point to that of a split pea, into which scaly masses extended. They were quite firm to the touch, not painful, but produced excessive itching as testified by the bloody excoriations. There were no elementary lichen lesions and no atrophic spots. I now obtained his consent to excise a piece from one of the larger growths. Having read J. Schuetz's article in the Archiv. für Dermatologie und Syphilis, 1900, in which he strongly recommended plastermull of mercury and arsenic for this affection, I tried it; carrying out the directions with painstaking accuracy, but without result. During these four years, I had looked carefully and also requested the patient to watch for pimples—elementary lesions—but found none. In April, 1901, I again saw him, when he reported less itching and his condition better. I observed on the inner side of the right tibia, near the inner side of the largest plaque, a group of about eight typical papules closely arranged. On calling his attention to these he said he thought these were not pimples,, but scratch-marks, because they itched intensely. Having him stripped, I could find no other elementary lesions, but on the mucous membrane of his left cheek just behind the angle of the mouth I saw two somewhat acuminate white papules scarcely as large as a pin's head. During the whole time of my observation I noticed neither any varicose veins nor any nervousness; he did not lose flesh and is now as active as ever.

Fig. 5.—*a*, Duct of sweat-gland; *b*, irregular projections; *c*, spindle cells.

In November, 1900, when the pictures were taken, a piece was excised from one of the largest plaques, fixed and hardened in alcohol, embedded in celloidin, cut, and stained in hematoxylin and eosin.

The microscopic examination shows the following conditions: Stratum corneum hypertrophied, with here and there a well-stained nucleus. Within this layer are seen the ducts of the sweat glands, broadened and filled with horny masses. Prolongations of this layer in the form of broad plugs dip downward into the thickened spinous layer. These plugs are not confined to hair follicles, as can be readily seen. The stratum granulosum is broadened, especially just below the horny plugs. The stratum spinosum, which is thickened, shows widened intercellular spaces; this is more true in the deeper layers, in which are seen infiltration cells penetrating from the papillary layer. In the spinous layer vacuoles are found, but only slight colloid degeneration. The pigment is not increased. The cells of the basal layer were well shaped, being flattened only in places. The papillæ are densely infiltrated, considerably elongated; and some are thin and irregularly shaped. The capillaries, lymph spaces and blood vessels are dilated. The infiltration cells in the papillæ are largely arranged in rows. In the subpapillary layer, the infiltration is irregular and quite dense; the blood and lymph vessels are dilated and here and there is an island of sclerosed connective tissue within a heap of infiltration cells. In this and the deeper layers of the corium, there are found groups of small spindle-shaped cells, also slender reticula of connective tissue containing cells, the latter resembling the structure of a lymphatic gland.

In the deeper layers of the corium the infiltration is scanty, being chiefly around the blood and lymph vessels and the sweat glands, the ducts of some of the latter being dilated. Plasma cells were not found. Hair follicles and sebaceous glands were not present in the sections. The anatomic findings correspond to those of lichen planus, but are more highly developed.

Summary.—The question now in regard to the presence of typical elementary lesion can thus be summarized: In some cases there is a more generalized eruption; in some only a limited number, and in still others none are present in addition to the warty plaques. In my second case typical lichen planus papules were only detected four years after I first saw him. We may infer, however, from the history and course of the disease that lichen planus papules may have been present at different times and been overlooked by the patient. That the verrucous lesions did develop from such, there seems to be no doubt, inasmuch as their development was evident from the coalescence of smaller ones. Sometimes, as v. Duering and Gebert emphasize, transition from the plain to the verrucous form can be observed. In other words, clinical as well as histologic considerations justify the interpretation that these verrucous plaques are a special manifestation of the lichen planus process. From the above considerations we draw the following conclusions:

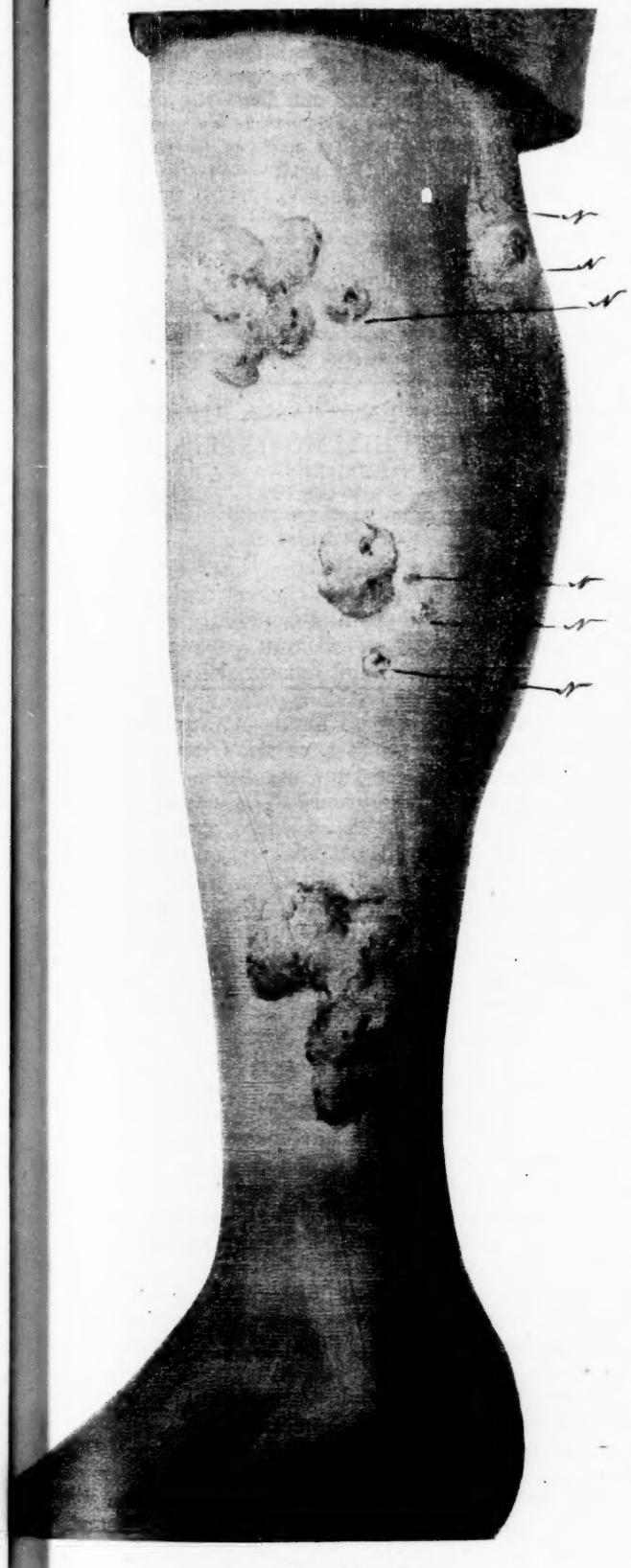
Fig. 6.—*a*, Small spindle cells in groups; *b*, sweat-glands; *c*, upper and medium part of corium; *d*, sclerosed connective tissue.

1. The absence of typical elementary lesions does not justify the exclusion of hypertrophic lesions from the class lichen planus.

2. The elementary lesions will be found at one time or another during the course of the affection.

3. This verrucous manifestation of the process may be due to circulatory derangements.

4. For cases in which elementary lesions are also present, and especially more extensive in distribution,



Outer side of left limb.

the prospect of treatment seems better than for those which present the verrucous growths only.

5. In some cases only repeated surgical interference will remove the affection and arsenic is more likely to prove serviceable at the periods when typical elementary lesions are also present.

The camera slides which I had the pleasure of demonstrating, as well as the photomicrographs, were prepared by Dr. C. T. Gramm.

The literature of the subject is fully covered by the reports of the last fifteen years: Archiv f. Dermatologie und Syphilis; British Journal of Dermatology; Journal of Cutaneous and Genito-Urinary Diseases; Monatshefte f. Practische Dermatologie.

103 State Street.

DISCUSSION.

DR. C. W. ALLEN, New York City—I was interested in the differential diagnosis which the Doctor brought out so very well. It is not always an easy matter to make a diagnosis in these cases, and we have to run through in our minds the various things mentioned, and little differential points are of great assistance. In treating warty hypertrophic lichen of late, I have been using the curette a good deal, and have been surprised to find how very soft the tissue is, deep in under the crusts and warty tissue. I think it is a good plan sometimes to curette the border if the patch is advancing. The border will usually be found, especially deep in underneath, as soft as that of lupus erythematosus, but I do not think it is always known to dermatologists even, how soft the latter may be at the advanced border.

DR. DOUGLASS W. MONTGOMERY, San Francisco—I would not like to make a diagnosis of lichen of any form simply on the ground of lichen-like papules, because you can get papules like lichen in almost any itchy disease of the skin. Lichen itself is a rare disease in my experience.

DR. H. G. ANTHONY, Chicago—Taking all the symptoms of the case together there can be no doubt that what the Doctor described as lichen hypertrophicus is the same as the lichen corneus of the French, and that differs in nowise from lichen planus, except that it is in an advanced stage. In this form of lichen, the lesions look like the burning end of a cigar, that is, ash-colored scales on the surface of a red background, shining through the scales here and there. As to the treatment of this condition, a good deal has been said, especially by authorities in New York, on the value of large doses of mercury, and I think it may be looked upon as established that mercury in all its forms is of value in lichen planus. I have been informed that lichen rubber planus cases would tolerate considerably more than an ordinary individual. The mercury should be given in large doses, and it does not matter what preparation you use.

DR. W. T. CORLETT, Cleveland—As the illustrations were passed around I had in mind two diseases, one a form of lichen, the other sarcoma. I have never had a case identical with this although I have had lichen verrucosus, in which the lesions were very large and much more numerous. I think the Doctor has drawn his conclusions well; I am inclined to agree with him in the diagnosis. In regard to the treatment of this affection, many years ago I was strongly impressed with the value of arsenic in this special form of skin diseases, first because I had never used it, and second, because Mr. Jonathan Hutchinson recommended it, and for a good many years I believed that good results might be obtained from arsenic, although I was unable to obtain them myself. In lichen planus, although I have given arsenic in increasing doses, I have never obtained the slightest benefit, so far as I have observed. I have not pushed mercury, therefore I can not say as to that, I believe there is no drug we can give internally that will have any effect in cutting short the disease. On general principles I generally give iron, strychnin, and other tonics.

DR. L. DUNCAN BULKLEY, New York City—As the subject of the use of arsenic in lichen planus has been spoken of, I wish to mention a very striking case in a man aged 35, where the use of arsenic pushed immoderately in the hands of others had greatly aggravated the eruption, which I have observed in other cases. In this instance the eruption, which had become so severe on the hands as to incapacitate him for work, yielded very rapidly and perfectly to the chlorate of potash and nitric acid treatment, recommended by Bergh, of Norway, over twenty-five

years ago. This I have employed constantly since that time, and in many cases, with satisfactory results. The hypertrophic conditions, as described in the paper, are not very rare in lichen planus. I have had a number of cases exhibiting lesions much like those shown in the colored drawings of Dr. Lieberthal. In some instances they were the main feature of the case, in others there was also an abundant eruption of small, flat papules. In this condition internal treatment is relatively inefficacious, and strong local applications are needed, such as Unna's salve of carbolic acid and bichlorid in diachylon ointment. Beginning with a milder strength, a few grains to the ounce, I have sometimes increased it until a blistering or a suppurative action has resulted.

DR. R. R. CAMPBELL, Chicago—In the several cases of lichen planus which have passed under my observation I have been in the habit of administering arsenic and in each case have had most satisfactory results. In one case, which was typical and was seen by Dr. Anthony in consultation with me, I administered arsenic, pushing it as rapidly as circumstances would permit, and the results obtained in this case were most gratifying. We had the satisfaction of following the case for some time, about the diagnosis of which there could be no question.

DR. H. C. SUMNEY, Omaha—I have used arsenic in Fowler's solution up to 35 drops, four times a day. A case had been treated by chlorid of potash and nitric acid. It was an undoubted case of lichen planus, part of it hypertrophied, on the arm and limbs, and we obtained very gratifying results finally with arsenic, working it up to 35 and 40 drops of Fowler's solution. Dr. Baum saw the case. We used the solution of arsenic hypodermically.

DR. M. L. HEIDINGSFELD, Cincinnati—In looking over the microphotographs, and also the lantern slides of yesterday, I was impressed with one point which Dr. Lieberthal has failed to bring to our particular notice. In many of the more favorable sections there is a dense massive wall of cellular infiltration, which is sharply confined to the papular layer of the epidermis, and extending to, and slightly involving the lowest layers of epidermal cells, to such a degree that a sharp borderline between this infiltrate and the epidermis is lost, and the columnar character of the lowest layer of cells is no longer preserved. These are very constant features of lichen rubber in its earlier stages when infiltration is well marked, and to my knowledge is not encountered to any similar degree in any other process, so that the microscopic appearance is very characteristic, if not actually pathognomonic. I can concur in the statements of those members who have seen favorable results from the administration of arsenic. I can not recall a single case that has not been promptly and materially benefited by this agent. I have used the hypodermic administration almost exclusively, employing one-gram doses of 10 per cent. cacodylic acid, or 2 to 3 per cent. sodium arsenate. I recall several cases where Fowler's solution and Asiatic pills had been administered internally, even to the degree of inducing distressing symptoms, without positive results, whereas the institution of hypodermic administration was followed by prompt material improvement.

DR. D. LIEBERTHAL, Chicago, in reply—Dr. Allen is right in calling attention to the soft border which really can be observed in some cases. The plaques increase by spreading in the periphery, and in their beginning as long as they are quite new they are rather soft and with increasing stage of development the consistence increases. These conditions are substantiated by the pathologic findings. In regard to the presence of typical elementary lesions, it is more difficult to make a diagnosis when they are wanting. In my second case I would not have made a clinical diagnosis as readily if I had not seen such cases during my service under von Hebra in the Vienna Policlinic. The reason why I entered into details and especially so with the differential diagnosis was because in the text-books the account of this manifestation occupies about four lines. Dr. Anthony's remark about the similarity of some lesions to the effect produced by the red of the burning cigar gleaming through the ashes is correct. Concerning the administration of mercury, I can state that I used it in my second case quite actively, but without results. Dr. Corlett, I think, spoke to the point. The plaques look very much like sarcoma, and I stated in my paper the differential diagnosis between these. The remarks of Dr. Bulkley in regard to the administration of arsenic are very worthy of note. It is true enough that in a large number of cases of lichen planus, arsenic will not produce the effects desired. The effect of arsenic depends frequently on the freshness of arsenical preparations. Sometimes we have to try one after another. Furthermore, the mode of administration is important. In some cases the patient can take arsenic by mouth, in others not, and we have to apply it subcutaneously or per rectum. Another important point is to see the patient frequently enough, to ascertain the limit of tolerance. I have found it expedient in every case where arsenic is administered to use an astringent as well and one of the best is iron, as was correctly remarked by Dr. Corlett. Unna's ointment sometimes proves of great value, especially if, after it is rubbed in, a woolen cover is applied and the patient is kept in bed.

NOTES ON RECENT CASES OF EXTRA-GENITAL SYPHILITIC INFECTION.*

L. DUNCAN BULKLEY, A.M., M.D.
Physician to the New York Skin and Cancer Hospital, Consulting Physician to the New York Hospital, Etc.
NEW YORK CITY.

At the meeting of this Section last year[1] I called especial attention to syphilis as a non-venereal disease, as observed in marital syphilis, hereditary syphilis, and that acquired by means of innocent extra-genital infection; the latter in social and industrial life, in the care of children, and in professional care of the sick. The instances where the disease has been in some manner innocently acquired, which have fallen under my personal observation and care, now number many hundreds, and there are constant additions. The subject of marital and hereditary syphilis is a large and interesting one, but must be illustrated on another occasion. At present it is desired to call attention to the rather frequent occurrence of extra-genital infection, as indicated by the relatively considerable number of cases which have come under my care in private and public practice during the past year, or rather since Jan. 1, 1900. On former occasions I have reported many instances of this form of infection, and the total number of cases which have come under my personal observation now amounts to about two hundred.

During the period mentioned, 21 instances of extra-genital syphilitic infection have come under my care, 12 in private practice and 9 in public; to these might be added 2 cases of chancres of undoubted venereal origin in unusual localities, 1 on the lower portion of the anterior abdominal wall, and 1 within the urethra. Many more cases have also been seen casually; for instance, at a recent meeting of the New York Dermatological Society a case was presented with chancres on the bridge of the nose, and another with one on the ball of the thumb; such are not included here. The following shows the location of the extra-genital chancres in these cases: Lip, 9; finger, 5; anus, 2; hand, 1; nostril, 1; hard palate, 1; tonsil, 1; eyelid, 1. Of these cases, 16 were in males and 5 in females; curiously enough all the 12 cases seen in private practice were in males, while in public practice there were 5 females and 4 males.

Chancre of the Lip.—Of these, 3 cases were seen in private practice and 6 in public. This location of in-

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1. JOURNAL A. M. A., April 6, 1901.

fection is undoubtedly more common among the poorer classes, who are more careless or reckless as to the dangers from the poison than are those in the easier walks of life, who have a healthy horror of the disease. Most of the cases presented no peculiar interest; 5 were on the upper lip and 4 on the lower; 6 were males and 3 females. They all gave about the usual history of a cold sore or abrasion of the lip, which failed to heal and gradually developed a hardened patch. In almost all of the cases the patients came for treatment because of the appearance of a more or less severe general eruption, and my experience has been that rarely are these cases recognized until the advent of constitutional symptoms. It is well known, however, that long before this the local sore is giving off an intensely contagious secretion, and the profession and the public need to be aroused to the danger of neglecting, on the lips or elsewhere, suspicious sores which refuse to heal. In one case in private practice the infection was proved rather conclusively to be due to smoking the pipe of a man suffering from syphilis, who had mucous patches in the mouth. In 2 other cases in private practice it was traced to barbers, the sore beginning just below the vermilion border, at a point injured while being shaved. Several cases were attributed to the kissing of people with mucous patches. In all the cases there was marked adenopathy, either just below the chin or on one or both sides of the jaw.

Chancre of the Finger.—Of the 5 cases of chancre of the finger, 4 were in physicians, with also a fifth physician, who received an infection on the ulnar side of the back of the left hand during an operation.

One of these cases, which has only very recently come under my care, has had such severe and distressing results that it merits particular description. Five years ago, Dr. ——, aged 47, injured the skin near the nail of the right index finger, with a nail cleaner, and very soon after the part was exposed while treating a chancre of the vulva. A few weeks later there was a slight sore on the end of the finger, under the nail, which in a week or two became a rather painful, small ulcer. The nature of the trouble was not suspected until a general macular eruption appeared, and under antisyphilitic treatment the eruption disappeared very promptly and the finger healed; at the same time the severe general malaise, with fever, ceased. Five or six months later subjective symptoms appeared again, but as there were no external manifestations of syphilis, the cause was not suspected, and specific treatment was not used. For the two years following the patient was miserable, long periods of rest and much treatment for stomach and other troubles being necessary. There was a severe and steadily increasing pain in the lumbar region and about eighteen months after the finger was infected he found it difficult to go up and down stairs and to get into a carriage; the patient's legs dragged and he felt weak and tired, and yet there was no suspicion of the cause, it being all attributed to overwork.

After retiring one night in March, 1898, two years after the infection, he became delirious and for the following five days was insane. It was then suspected that the cause was syphilis, and iodid of potassium administered freely. During the next three months there was increasing motor disturbance in the lower limbs, until in June when on attempting to leave the bed the lower limbs were found to be totally paralyzed; this paralysis lasted for about five months. Power in the limbs then returned very slowly and he can now walk with difficulty with the aid of two canes, but he can not stand for more than a minute. The bladder and rectum are both partially paralyzed, requiring the use of the catheter and high rectal injections. He is at present improving rapidly under very active mixed treatment.

In the case of another physician, aged 38, who was infected beneath the left thumb-nail in May, 1884, the most severe and disfiguring tubercular lesions have appeared upon the face and within the mouth, quite incapacitating him for work; this condition has resisted treatment and recurred in an agonizing manner. There were never any severe early symptoms and he was married in June, 1888. The following year a healthy boy was born; the child is now in perfect health and well developed. His wife has had no more children, nor any miscarriages. Under very careful treatment the lesions, for which he has recently come under my care, are healing nicely, but a large amount of scar tissue will be left.

In another case of a physician, aged 33, infection took place, on the site of a wart which had been injured, on the back of the right forefinger, during the delivery of a dead child from a supposedly syphilitic woman. The earlier symptoms of constitutional syphilis have been moderately severe, but have yielded well to treatment. The other cases are still more recent and little can be said in regard to the severity of the disease.

Chancre of the Anus.—Two interesting cases of chancre on the side of the anus have been seen recently, both discovered only after the appearance of the general eruption. In 1 of them, a young man aged 28, seen in consultation, there was good reason to believe that it was due to improper practices; but in the other there was no possibility of such a cause, and mode of infection has never yet been ascertained. In a similar case, which I have already reported, the infection was traced directly to soiled bathing drawers, but in this instance no such cause existed. It must have been contracted in a watercloset, from secretions left on a paper, or possibly on hotel bed linen, for he traveled extensively. The case is worthy of special mention because of the severity of the symptoms and the length of time which elapsed before the true nature of the trouble was recognized.

Mr. J., aged 46, has long had what was called "itching piles," and has been obliged to scratch the anal region. On Dec. 27, 1900, he noticed a raw or ulcerated spot to the right of the anus, which persisted until he presented himself, April 6, 1901. Within two weeks after the ulceration was noticed there was a general eruption, quite papular in character, which was still present when seen. This had been diagnosed as chicken-pox and other conditions, but its true character had never been recognized, partly, perhaps, because of the character of the man and the absence of exposure through intercourse.

When first seen there was an abundant large, flat, papular syphilide over the body, limbs and face, which was unmistakable. The lips and mouth were also the seat of the most profuse mucous patches, producing great distress. Recognizing the nature of the eruption, I sought for a long time before finding the seat of infection. The penis was free from disease, there was no evidence of a present or past primary sore on the fingers, in the mouth, or on any part of the body, until the anal region was examined. There was then found on the right side, extending somewhat into the opening,

a partly healed, superficial ulceration, with quite a hardened base; this had existed for over three months and only palliative ointments had been used, but these served to prevent much annoyance. During all this time he had been totally without specific treatment, and had mingled freely with others, in his home and elsewhere, without the slightest suspicion of the immense danger from the profuse discharge given off by the raw mucous patches covering the lips and much of the buccal cavity. The only wonder is that there are not more cases of extra-genital infection from some of these neglected cases.

The progress of the case under very active specific treatment was remarkable. The eruption faded very promptly, the mucous lesions in the mouth healed shortly, as also did the sore in the anal region, and in a month there were only some stains to indicate the nature of the former trouble.

Chancre of the Hand.—Five months before Dr. T., aged 55, consulted me, he had noticed a sore on the back of the right hand, on the ulnar side. This had occurred after an operation on a patient where there had been much pus, and, as there was much inflammation in the sore on the hand, with the formation of abscesses on the arm, which were opened, the real nature of the infection was not recognized. Some five months later he noticed the general macular papular eruption, which had faded materially before I saw him, and when he presented himself he had also a very considerable amount of mucous patches on the tongue and lips. There had been no other infection, and he certainly had not been exposed venereally. The delay in the appearance of the eruption was probably accounted for by the severity of the ordinary pus infection already alluded to; this has been known to retard the development of the constitutional signs of syphilis.

Chancre of the Nostril.—Mr. D., aged 34, was sent to me for the diagnosis of a general eruption which had appeared first about ten days previously and had rapidly developed, covering the entire body and limbs, including the palms. He was surprised and indignant when the eruption was pronounced syphilitic, for he was a married man and had led an extremely virtuous and careful life. There was certainly no primary lesion on the penis, although the general large, papular syphiloderm existed there; neither could any site of infection be found anywhere on the body, limbs or elsewhere until attention was directed to a soreness in the right nostril, which almost occluded it. It was then learned that for fully six weeks preceding he had suffered from what he supposed to be a cold, having much trouble with the throat, and a soreness deep in the right nostril, which he considered a "cold sore." He had taken no specific treatment, as the nature of the trouble was not suspected until the advent of the eruption.

On making careful and deep examination, with the throat specialist, who had suggested the consultation, we found the right side of the septum nasi the seat of a superficial ulceration, running back nearly an inch, and half an inch or so wide. It was rather hard, with quite sharply-defined edges and a gray pultaceous floor. There was considerable swelling of the turbinated bones and some mucous patches around them. The submaxillary glands on the right side were much enlarged. The source of infection could not be traced. In another case of chancre in exactly the same location, previously reported, the poison was probably from the patient's grandchild, whom she had cared for, and who soon after died with hereditary syphilis.

Chancre of the Hard Palate.—Mr. W., aged 50, a lawyer, was brought to me by his family physician on account of a general macular eruption which had appeared a week or two previously. There was no question in regard to the diagnosis, but the same difficulty as in the other cases presented itself. How had the infection been acquired? He was a man of high moral character, who certainly had not been exposed through sexual congress. The same search was made for the site of entry of the poison, the patient being stripped, and for a long time no local sore was found on any part of the body or in the throat. Attention was then directed to a certain soreness which he had long experienced on the roof of the mouth. A well-defined ulceration was there found, in the median line about one inch from the front teeth, oval in form, and partly healed, but with a superficially ulcerated base; the submaxillary glands on each side were found enlarged. The source of infection was never ascertained, but supposed to be through eating in public places.

This patient has faithfully carried out the treatment for over a year, and has experienced as yet no serious symptoms from his disease. The eruptions faded rapidly and the ulcer on the roof of the mouth healed quickly, under active specific treatment, and his health, which had suffered greatly, improved in a remarkable manner, he regaining many of the pounds he had lost.

Chancre of the Tonsil.—Miss McG., aged 30, was brought to me by her physician, with a very profuse large papular syphiloderm, developed principally about the mouth and face, but with also some scattered lesions on the neck, chest, and elsewhere. The throat had been sore for some weeks and on examination the left tonsil was found to be greatly enlarged, distinctly hard to the touch and with tolerably well-defined ulceration over most of its surface; the submaxillary glands on that side were large and hard. No source of infection was discovered.

Chancre of the Eyelid.—Mrs. ——, aged 32, had a sore on the edge of the lower right eyelid, extending well over its inner surface, for the treatment of which she applied to one of the eye clinics. After the appearance of a general eruption the nature of the trouble was recognized, if not before, and under proper constitutional treatment the eruption disappeared and the sore on the eyelid healed. When she came to me there was really only the scar of the chancre on the inner surface of the right lower eyelid, with some adenopathy on that side, and some remains of the already faded eruption. No history as to the source of infection could be obtained, and no suggestion as to the source of the virus could be made.

While these cases present nothing that is striking or peculiar, it was thought desirable to place them on record as instances of the accidental and innocent acquirement of syphilis aside from coitus, which are really more common than the general profession appreciates. While some of them were in physicians, who are known to be frequently exposed, over three-fourths of the whole number of cases were in lay people, who never appreciated the possibility of such an accident and who, perhaps, could not have protected themselves from it, even though aware of the danger to which they were exposed. By the repeated recording of such cases the profession and public will in time learn that syphilis is not always acquired through the act of coition, and

the stigma attached to a person infected will be in a measure removed.

DISCUSSION.

DR. L. B. BALDWIN, Chicago—The articles I have written on the subject have been chiefly addressed to dentists. In looking carefully over the text-books of dentists in not one can I find any reference made to the contagiousness of the mucous patch. That struck me immediately. I had five cases of young practitioners attending the dental colleges in Chicago who were suffering from mucous patches. I have also had four cases where I could trace the infection of the patient directly to the dentist's chair. The greater number of chancres, as I have seen them, occur in the better classes, not in the poorer classes. I do not think the question of filth or habits have much to do with the possibility of acquiring a chancre on the lips or mouth or tongue, as I do not think the chances are as great in proportion as among the better classes. Dr. Rhodes asked if I had any cases of chancre of the tonsil. I had two, and gave them to Dr. Rhodes, who collected 32 others. The chancres occurred in physicians. I have seen three, one, a physician in the West, who was suffering from chancre Dr. Baum saw with me. He had infected himself by turning a doorknob and lacerating the skin of the finger which caught in the door. He was treating several syphilitics at the time. I think medical teaching should be such that the dentist could recognize a chancre or mucous patch. There is absolutely nothing on that subject demonstrated in the Chicago colleges, and the number of mucous patches and chancres that come to the dentist, thinking that the lesion is due to some trouble with the tooth or gum, is surprising. In the last year I have had sent to me by dentists 20 or 30 cases of syphilis. One dentist said to me that he had not seen a case of syphilis of the mouth in thirty-three years of practice in Chicago. I agreed with him that he had not seen it. The subject of extra-genital chancre is very interesting as a subject, but I do not consider it nearly as important as the subject of mucous patches of the mouth, which are so directly related to the initial lesion, and they are so much more common and last so much longer that I think the subject of mucous patches of the mouth should be taken into consideration with more thoroughness than is generally shown by the profession.

DR. L. E. SCHMIDT, Chicago—Out of a series of eleven last year one was a so-called hypertrophic chancre of the lip. It assumed the size and proportion of a small pear. It was situated in the median line of the lower lip and hung over like a large protruding part of the lip. Only in the center and lower portion was there a small, rounded, glazed, eroded surface having the typical appearance of a chancre on any other part of the body. I wish to state in this connection that the rash was present when the case came under my observation. A mercurial inunction treatment was started, but the tumor remained unaffected as far as the size and appearance went. Only when iodid of potash was administered in large doses in connection with the mercurial inunction treatment did the mass commence to disappear. Now, after four months' treatment, there remains no sign of any former lesion.

DR. D. W. MONTGOMERY, San Francisco—I would speak of an instance that occurred some time ago in my own practice where a grave error might have been committed by me in the diagnosis of a chancre of the tonsil. The man was coming from Bakersfield to Los Angeles. He looked in the glass at his throat on account of uneasiness there and found a lesion on the left tonsil that he took to be a chancre. He was not a physician but was a very intelligent man and knew something of medicine. He continued his journey to Los Angeles, saw two men there that are used to seeing chancres and they took it to be a chancre. He returned immediately to San Francisco because he wished to be under the charge of some one who would take permanent care of him and he wished them to see the sore as it then existed. He first saw it on Saturday; on Sunday two physicians in Los Angeles saw it; on Monday I saw it. I took it to be a chancre, and I thought of every possibility. The only thing about it was that it was not very hard, but some chancres are not very hard, and the lymphatic nodule under the jaw was not very marked nor very hard. However, I took it to be a chancre, for it looked absolutely like one. I remarked what a beautiful photograph it would make as the man held his mouth open and depressed his tongue and one could look right down on the base. That forenoon he saw two other men, both of whom were used to seeing chancres, and they both thought it a chancre. We met in consultation that afternoon, and all three agreed that it was a chancre, but as we thought it would do him no harm we had better wait, and commenced to give large doses of tincture of iron. In three days it was vastly improved, and in seven days there was nothing left but an unevenness of the surface. I do not know what it was; there was cultivated from it a bacillus that was certainly not the diphtheria bacillus; it was larger and thicker than the diphtheria bacillus, and it was thinner and shorter than the leptothrix. I do not know what the disease was, but it was not chancre.

DR. C. W. ALLEN, New York City—I do not think the Doctor has proven at all that it was not chancre. Sometimes chancre is a very minute thing; sometimes in a few days it disappears.

DR. D. W. MONTGOMERY—He has never had any symptoms since.

DR. ALLEN—That is different. But a case like that should be observed very carefully for the next six to twelve weeks, or even longer to make sure, because not only may the chancre be almost nothing but the early eruptions be nothing. In my early days I took to Dr. Bulkley to have the diagnosis confirmed a young man who had on his body twelve spots, by actual count. It looked like measles. That was the most eruption the man ever had. He had mucous patches, which confirmed the diagnosis afterwards, but it goes to show how very slight secondary cases of syphilis may be.

The primary lesion of syphilis is not always recognized; to illustrate that point, a young man came to me who had been to a celebrated hospital in New York and had the glands of his neck cut out. I do not know what they took the lesion for, but they made a long incision and excised all the glands of his neck and then they let him go. What they were operating on was a chancre, and these glands would have gone down beautifully under iodid of potassium if the gentlemen had recognized the trouble. But they do not as a rule have chancre in their minds. It is not surprising that the average practitioner who sees a little patch of syphilis here and there should let it escape him when he sees the sores in an unusual position. I would pass for a moment an illustration of what I believe to be a very unusual chancre of the lower lid. I have had chancres about the upper lid where there was a great amount of swelling, the eye being closed for some days and where there was going to be apparently a great loss of tissue, and it was surprising to see what little scar remained after the lesion healed. I have had a chancre of the lid in a position where it could not be accounted for unless in his work he had scratched the lid.

If Dr. Bulkley had not mentioned the fact that this physician had produced a lesion near the nail, and that was where the chancre was located, I might have thought he was describing the case of a physician I treated. My man had a little chancre on the knuckle, acquired in the practice of obstetrics. It is a statement sometimes seen in the books that lesions upon the hands are followed by more severe symptoms than the ordinary form of chancre upon the tongue. I have never been able to absolutely confirm that, although such cases as related by Dr. Bulkley with paraplegia, loss of consciousness, etc., would have that appearance. My man had every once in a while slight attacks of aphasia; he would be unable to talk for some time, then he would get all right and go off on a little trip, pushing the iodids and being all right again. But it is an interesting point as to whether these lesions upon the hands are followed by more severe symptoms than the ordinary syphilis we see.

I do not think the location has much to do with it. I do not think the data we are accumulating as to where the extra-genital chancre occurs, whether in women more than in men, has any bearing on the question. Where there is a solution of continuity and the virus enters there you get the chancres, and can get them on every susceptible part of the body. Large numbers appear to come from the barber shop; some come from

midwives. In the most recent case there had been a scratch from a diaper pin at the time of infection. Dr. Bulkley's case of family syphilis transferred from the baby to the grandmother is very interesting. I read of a case in the *Medical Record* where the baby first acquired a chancre from the wet nurse and gave it to the mother, a chancre of the nipple; the mother gave it to a second child and that child probably to the father, who had a chancre on the surface between the nares. There was the wet nurse, the child, the mother, another child and the father; so the whole family got it in succession in the same innocent way.

DR. D. W. MONTGOMERY, San Francisco—I forgot to mention that, in the patient I was speaking of, the lymphatic nodule quickly went down, which would never have occurred had it been syphilitic. There was no involvement of more than two lymphatic nodules and a sufficient time has elapsed between then and now to exclude specific disease. I do not believe it was a chancre.

DR. R. R. CAMPBELL, Chicago—I do not believe the occurrence of extra-genital chancre is quite as uncommon as we are led to believe; I think they occur more frequently than we have any idea of, but I do not think the diagnosis is made, particularly by the general practitioner, and the error is made from the fact that the general practitioner expects to find the secondary symptoms of the disease adjacent to the part in which the chancre is situated, which is not the case. It has been my experience that secondary manifestations usually occur about the chest and umbilicus. In cases of chancre of the lip that have passed through the hands of a general practitioner and come under my care, in talking the case over with the physician who has treated it previous to its coming under my observation he has invariably stated that he has had the case under observation from three weeks to four months and has not seen any secondary manifestations. To the question, Have you stripped the patient and looked him over for secondary manifestations? the answer is, "No." In almost every case of that character the secondary manifestation has been demonstrated, much to the surprise of the general practitioner who has treated it. The interest in cases of extra-genital chancre lies more in the mode of infection than from the fact of its being extra-genital. Four cases of chancre of the tonsil have fallen under my observation in the past year in which no visible means of infection could be traced or demonstrated, and in patients whom I had a right to believe had nothing to gain by holding back anything of interest to the attending physician. In another case, a chancre of the lower lip, the only history obtainable was from a drinking cup. The girl had been to a public dance and had drank from a glass which had been publicly used. I think if in the teaching and text-books more stress was laid upon the fact of the appearance of the secondary eruption about the chest and umbilicus, pointing out that the glandular enlargement is adjacent to the lesion and the secondary manifestations come first on the chest and abdomen, we would have more correct diagnoses of extra-genital chancres, and without the appearance of secondary manifestations I claim no man is justified in making a positive diagnosis of chancre and beginning anti-syphilitic treatment.

DR. D. LIEBERTHAL, Chicago—I believe it was wise and appropriate for Dr. Bulkley to bring out in his paper, from a scientific point of view, and more especially from a sociological standpoint, that millions of dollars are spent for sanitary progress and thousands of dollars for the prevention of disease, for instance, measles, and there is no reason why we should not call attention to the dangers which are menacing the public. I do not see why we should not try to make the subject more popular and not let it be said that the thing is not so bad because it can be conveyed only by sexual means.

DR. W. T. CORLETT, Cleveland—I have in mind now a young man I left at home who was probably infected from the barber. This point is of interest because the public should know, their attention should be called to the matter. This young man has a facial sore. He had a little pimple; he thought it was a hair, attempted to straighten or pull it out and the result is a chancre on the cheek, at least I think it is. Sufficient time had not elapsed to make the diagnosis certain. I think it is well, as pointed out by Drs. Montgomery and Campbell, to wait until you are positive of the diagnosis. For eighteen years I have taught this to medical students, because I have seen the importance of it in coming in contact with cases treated by the general physician. So frequently a snapshot diagnosis of chancre is made; the patient is subjected to mercurial treatment; the result is the lesions disappear and years afterwards the question may arise as to whether or not the patient ever had syphilis. Those questions are so important that I think it is extremely necessary to impress upon students and others the advantage of waiting until a positive diagnosis can be made. I think it is no disadvantage in the way of treatment. Dr. Bulkley mentions a chancre resembling a "cold sore," which brought to my mind the fact that I have known a number of chancres following a cold sore. I have in mind a physician who a number of years ago had a sore on the lip. He had been treating a syphilitic patient and had a habit of stroking his mustache, with chancre as a result. With most physicians I find the chancre is on the hand, usually the right hand, not always at the border of the nail but somewhere on the index finger.

Dr. L. B. Baldwin mentioned the prevalence of syphilis in dentists. I think that is extreme. Some years ago we had a dental class with our medical class; the dental students were in the habit of coming to my office with venereal disease. Dental students in my experience are the most frequent victims of venereal disease and I suppose it is because they have absolutely no teaching. With our own students it is exceptional to have them come with venereal disease, but not so with the dental students because they are not instructed in regard to this dangerous eruption of the mouth. In regard to the severity of syphilis following extra-genital chancres, I agree with Dr. Allen that it has nothing to do with it *per se;* that the disease as such is usually neglected and goes on week after week and month after month without treatment and in those cases one expects to find and does find very severe constitutional symptoms following. In regard to the treatment of these neglected cases of course we all have special forms of treatment and we all probably have more than one method of treatment. I think in the treatment of syphilis we should not follow one routine; some by the mouth, some by inunctions, some by nitrate of silver injections. I think in severe cases nitrate of silver injections are by far the best because the most rapid and because there is an opportunity to push the drug without interfering with digestion. For many years I have used the salicylate of mercury, pushing it until the physiologic effects are produced and I only remember one instance where it was followed by an abscess.

DR. L. DUNCAN BULKLEY, in reply—I regard the points brought out in the paper of practical interest, because these cases come so unexpectedly, and if unrecognized, in families, they may produce much havoc. In regard to the relations of dentists to syphilis I think the physicians should give them every opportunity of knowing and recognizing the lesions of syphilis about the mouth. On two occasions I have lectured on the subject before the dentists of New York, exhibiting pictures and casts; it is very important that they should be able to recognize mucous patches. At the New York Skin and Cancer Hospital we had recently a course of lectures on syphilis by members of the attending and consulting staff, and the one on syphilis of the mouth, nose and throat, by Dr. Delavan, was repeated to a room full of dentists, cases being shown.

On the occasion of one of my papers on the dangers of syphilis in dentistry, before the New York Odontological Society, a physician present said, in discussion, that at the beginning of treatment of a patient with syphilis he sent him to the dentist, to have the teeth put in order, that there might be less danger of injury from the mercurials. I deprecated this practice, believing it to be better for the patient to suffer than to expose the dentist and others to the dangers of contagion; and I forbid the patient going to a dentist until I gave permission. When it is necessary for him to go I believe the dentist should

be informed of the condition of the patient, as should any other physician, and he can take the risk if he chooses, and take extra precautions against acquiring the disease or transmitting it to others.

Many of these cases of extra-genital chancre are curious and difficult of recognition. Few would suspect that this picture of chancre of the eyelid, exhibited by Dr. Allen, was of this nature; probably not two men in the medical section nor ten in the surgical section would so diagnose it. I was interested in Dr. Montgomery's case of suspected chancre of the lip. As I remarked before, these cases are sometimes very difficult of diagnosis, and opinion must sometimes be suspended for awhile. Some years ago I had a sore on the knuckle of my left hand that lasted for some weeks, which several of my confrères in New York regarded as a chancre, as I was much occupied with syphilis and had abundant opportunities for inoculation. After studying it pretty thoroughly I was satisfied that it was not such, and it healed under simple dressing, when the finger was splintered and irritation avoided. Some months afterward I had a node on the left tibia, which my friends agreed was of syphilitic origin, the result of the supposed chancre of the knuckle. But on investigation this was found to be the result of pressure on the sharp edge of my desk, as I sat writing, and this, too, disappeared under simple and proper measures without anti-syphilitic treatment. It is needless to say I never had any true signs of syphilitic infection. There is much need, therefore, of very great care in analyzing supposed cases of extra-genital chancre.

In regard to the location of the sore I may say that in my own practice, private and public, and in clinics and societies here and abroad, I have seen the primary lesion of syphilis situated on almost every portion of the body—about a hundred on the lips, dozens on the fingers and hands, many in the throat, etc. I would like to inquire of Dr. Baldwin if the 32 cases of chancre of the tonsil which he mentioned included the 15 which I reported some time ago?

DR. BALDWIN—No, they were cases collected in Chicago.

DR. BULKLEY—Since reporting these 15 cases I must have seen half a dozen or more other cases of chancre of the tonsil. They are not so very uncommon, and should not be overlooked; indeed, extra-genital chancre in various locations is far more common than is generally supposed, and accounts for the infection in many cases of old syphilis, where the sufferer is quite unconscious of the nature of the disease. I mentioned casually a case of chancre of the urethra to call attention to the possibility of having the sore in a location which may be overlooked; these cases are commonly regarded as gonorrhea. I also referred to an instance of chancre on the abdomen, just above the pubes; both of these were undoubtedly of venereal origin, but in locations not readily recognized.

In the case detailed of chancre in the region of the anus, it is very instructive to think what might have happened if the eruption had disappeared and the sore healed without the true nature of the disease being recognized. If the patient had later developed a syphilitic brain lesion, or one deep in the eye, or any serious later manifestation of syphilis, his physician would be thrown off guard by the fact that the man had not been exposed venereally and would have denied having had syphilis. The profession should be more on the lookout for these unusual cases, of which I have now seen about two hundred.

The Campaign Against Malaria in Italy.—The new law making the sale of quinin a government monopoly in Italy enables it to be sold at cost price, and brings it within the reach of the poor even in the remotest hamlets. The law also provides for the compulsory quinin treatment of malarial government and railroad officials and also of the employees of contractors, etc. Celli has recently discovered a large region in Tuscany where although swamps and anopheles abound and malaria is constantly being imported, yet it never spreads, and there has been no autochthonous malaria for twenty-five years throughout the region which was formerly a hotbed for the disease.

TRAUMATIC ARTERIO-VENOUS ANEURYSMS OF THE SUBCLAVIAN VESSELS,

WITH AN ANALYTICAL STUDY OF FIFTEEN[1] REPORTED CASES, INCLUDING ONE OPERATED UPON.*

RUDOLPH MATAS, M.D.
NEW ORLEANS.

PERSONAL OBSERVATION.

Synopsis: A case of traumatic (gunshot) arterio-venous aneurysm of the right subclavian vessels, involving the artery within the scaleni; division of the artery between ligatures placed on the first and third divisions; detachment of the anastomotic connection; lateral suture of the venous orifice; osteoplastic resection of the clavicle under eucain B. anesthesia; recovery, with partial loss of hand and forearm from arterial ischemia.

On September 8, Moise M., a young Acadian farmer, native of Rayne, Acadia Parish, La., was brought to me for treatment at the New Orleans Sanitarium. His attending physician, Dr. C. H. Power, Rayne, who kindly referred him to me and accompanied him to the sanitarium, gave the following particulars of his history and of the circumstances under which the injury was inflicted. We may premise the history of the injury by stating that he is a robust and exceptionally healthy man, aged 24, married. He is broad-chested, muscular, frugal, and temperate; very calm, collected, and courageous. In health he weighs 165 to 170 pounds, and is six feet in height. He is very industrious and active, and has always been engaged in outdoor pursuits. His past history and that of his parents, who are living, reveals no antecedents which bear upon his present troubles.

On Sept. 3, 1900, six days before his arrival at the sanitarium, and while attending a country festival near his home in Rayne, he became engaged in a personal difficulty at about 8 p. m. In the struggle that followed, he succeeded in throwing his antagonist to the ground, and, while holding him down with both hands, the latter drew a revolver from his pocket, and pressing the muzzle close to M.'s chest, fired.

Immediately after the shot M. felt the grip of his right hand relax and realized that his arm had been paralyzed. The spectators in the meantime parted the combatants, and M. was at once driven in a buggy to Dr. Power's residence, a distance of one mile. Though very weak, the patient stepped out of the buggy without assistance and walked a few steps into Dr. Power's office, when the latter saw him, about forty minutes after the shooting. After a hasty examination, sufficient to convince the doctor that the injury was of a very serious character, he applied a compress of iodoform gauze over the wound, and secured this in place with adhesive plaster. The blood had soaked through the patient's clothing and was still flowing out of the orifice of penetration when Dr. Power applied the compress. The bullet wound was small, however, and this moderate pressure succeeded in arresting the bleeding, though it was evi-

1. While this article is in press two additional observations of arterio-venous aneurysms involving the subclavian vessels have been reported by MM. Gallois and Piollet, Lyons, in a contribution on vascular injuries caused by simple fractures of the clavicle. ("Les déchirures vasculaires par fractures fermées de la clavicule," etc., in Revue de Chirurgie, Paris, No. 7, 21 année, July 10, 1901.) These observations, together with the case of Vasilyeff, in which there was ulceration of both vessels in abscess cavity, have reached me too late to be incorporated in the text, but will be found in the final table of the reported cases, which epitomizes the history of seventeen cases of arterio-venous aneurysms of the subclavian vessels, instead of the original fifteen tabulated up to the date of the meeting.

* Read at the meeting of the American Surgical Association, held in Baltimore, May 7, 8 and 9, 1901.

dent by the rising swelling in the neck that a concealed hemorrhage was now progressing actively in that region. After a few minutes' delay the patient was helped to his buggy and conveyed to his home, a distance of one mile, where he was at once put to bed and an ice bag applied over the injured area. At no time did the patient lose consciousness, and it was not until he had reached home that he showed signs of great prostration and shock, which became intensified as the night advanced and the swelling in the neck and shoulder increased.

At the examination, made early that night at the patient's home, Dr. Power, in consultation with Dr. Webb, ascertained the following facts: The patient had been wounded by a 38-caliber bullet from a Smith & Wesson revolver, and the bullet had penetrated in the right second intercostal space about three inches from the right margin of the sternum. The bullet had ranged obliquely upward and backward, inclining slightly toward the right, evidently passing under the clavicle without fracturing the bone, and finally lodging under the skin at a point corresponding to the anterior border of the trapezius, midway between the mastoid and the acromion, where it could be felt distinctly by the touch. A large swelling had formed in the neck immediately after the injury. This was caused by large hematoma, which extended from the shoulder to the angle of the jaw laterally and from the second rib to the scapular region antero-posteriorly. All external bleeding had stopped and only a bloody ooze stained the dressings. The skin for some distance around the bullet wound was powder stained and burnt. The most notable sign that attracted the attention of the attending physician at this time—not more than two hours after the injury—was the "intense throbbing or pulsation which was perceptible in the swelling on the chest and neck, and a loud thrill, which could be felt along the course of the subclavian vessels, extending over the neck up to the angle of the jaw and down the shoulder and upper arm." The pulse in the arteries of the right arm was absent. It was also noticed that the arm on the opposite side was motionless and anesthetic all over the hand and forearm. Evidently there had been a coincident lesion of the brachial plexus.

The general condition of the patient had grown worse since his return home. Coincidently with the development of the swelling and aneurysmal signs, he had become weaker; he now showed positive signs of shock and profound exhaustion; he was cadaverically pale and the skin was covered with a profuse perspiration. The pulse on the sound side was rapid and small. He had lost a considerable quantity of blood — sufficient to soak through his clothing—immediately after his injury, but this had ceased readily under slight pressure with the gauze pad applied by Dr. Power. It was evident, therefore, that this condition of progressive shock was due to the concealed bleeding in the hematoma. A compress was re-applied over the wound, and this again was covered with the ice bag. By midnight, four hours after the affray, the patient was so completely collapsed that he was believed to be moribund, and no hope was entertained of his recovery. He remained in this apparently dying condition until noon of the following day—September 4—sixteen hours after the injury, when the first signs of improvement were noticed and the patient began to rally. With this improvement the enormous swelling in the neck began to harden and contract, though the pulsation and thrill remained unchanged.

Dr. Power then states that the patient's temperature was above normal and fluctuated daily—September 4 to 8—from 100 in the morning to 103 in the evening. By absolute rest, diet, careful stimulation, and watchful nursing the patient continued to gain strength, though slowly. It was noticed, however, that the throbbing and thrill in the supraclavicular swelling continued to grow more diffuse and intense as the swelling diminished. No notable improvement was observed in the condition of the arm, which continued to be "of no use to the patient" and remained pulseless at the wrist and in the arm. This was M.'s condition when he was brought to the sanitarium in New Orleans, Sept. 8, 1900.

When I called to see him he was lying in bed, still extremely pale and exhausted from his long journey and the exertion involved in transportation from the train to the institution. His expression was anxious, and there was some complaint of pain in the neck. The right pulse, which had disappeared completely, was felt at the wrist very faintly to-day for the first time—the fifth day after the injury—showing some re-establishment of the collateral circulation. At 11:30 a. m., when the patient was admitted, his temperature was 98.8, but in the evening it rose to 101, with a pulse of 110 and respiration 22.

Upon examining the patient I first observed a dark circular slough, the size of a silver quarter, in the skin over the right second intercostal space, about three inches from the sternum. Numerous inflamed powder stains dotted the skin, testifying to the close proximity of the pistol when fired. The entire supraclavicular region is swollen, also the region of the trapezius, entirely obliterating the normal outlines of the clavicle; in the neck a space as large as the palm of the hand is bluish-black from extensive ecchymosis. The center of this spot is particularly dark and corresponds to the site of the bullet, which can be felt distinctly movable in a bed of semi-fluid hematoma. The skin of the entire supraclavicular region from the angle of the jaw to the shoulder on the right side is discolored from the deep subcutaneous extravasation. There is a very distinct subcutaneous heaving pulsation, this being most marked along the course of the subclavian vessels and the right internal jugular vein. This vessel swells and fills up the suprasternal space with each beat of the heart. The superficial veins of the neck and arm, the cephalic and basilic veins down to the elbow are all unusually prominent, and their dark-bluish color stands in conspicuous relief against the unusually pale, waxy skin. On palpation there is marked pitting on pressure from edema, over the clavicle and the entire supraclavicular region; the general pulsation seen over the supraclavicular region is distinctly confirmed by palpation. A widely diffused and intense purring thrill can be felt by the most superficial contact with the surface all over the neck, and more especially over the subclavian, jugular, cephalic, and basilic veins. The thrill appears to be transmitted in all directions from its point of greatest intensity, immediately above the middle third of the clavicle, all along the venous currents of the neck and arm as low down as the right hand. The most striking phenomenon is the peculiarly loud murmur which is heard all over the neck, chest, and arm, along the course of the venous trunks. This murmur is difficult to describe; it is a continuous hum, with diastolic whirring accentuations, and is heard with greatest intensity over the middle of the clavicle, and is harsh, buzzing, and, in fact, indescribable. Several odd comparisons were made by those who heard it, but no description or analogy appears to give an accurate idea of its extraordinary peculiarities. This murmur is so loud that it can be heard by listening attentively at a distance of nearly one inch

from the surface. This murmur, like the thrill, is propagated with greatest intensity along all the venous trunks from the bend of the elbow to the innominate veins and superior vena cava. It can be heard distinctly over the facial and temporal veins. Its vortex or loudest point is over an area the size of a silver dollar, situated just above the middle third of the clavicle, in the very center of the bullet tract, and evidently in a line with the subclavian vessels.

In spite of all this great vascular upheaval and disturbance, the work of repair was evidently progressing steadily in a favorable direction. The swelling of the original area had on the ninth day markedly subsided; the extravasation was being absorbed, and it was evident that the large stream of blood which was being poured out of the artery had found a direct outlet in the veins; these had accommodated themselves to the abnormal pressure, and were carrying off the overflow through comparatively safe channels back again into the circulation. Associated with these evidences of vascular disturbance there still remained a marked paresis of the entire right arm down to the fingers. The arm could be moved slightly by strong voluntary efforts, but pronation and supination were impossible, the arm usually remaining motionless, extended and passive by the side of the body, or it remained inert in which ever position it happened to be placed by the patient's left arm or by the hands of the attendants.

The sensibility was impaired all over the arm up to the shoulder, but sensation could be elicited by deep pricking with pins over the fingers and hand on the palmar and dorsal surfaces. The thermic sense was also greatly impaired, but the application of very hot water to the hand, as in washing this part, elicited some sensation on the part of the patient. The condition was really one of paresthesia and paresis rather than paralysis, and this encouraged the belief that the injury to the brachial plexus was a contusion and partial laceration rather than an actual division of its constituent trunks.

DIAGNOSIS.

By summarizing the evidence thus clearly presented the following points were determined: 1. That the course and direction taken by the bullet indicated that the missile had penetrated the neck by passing under the clavicle without injuring it, had crossed the path of the subclavian vessels just about where the scalenus anticus crosses the artery, and after injuring both artery and vein had grazed and contused the brachial plexus.

2. The immediate cessation of the radial pulse at the time of the injury, which continued to be imperceptible until the fifth day, and the coldness of the skin and pallid appearance of the arm, indicated that the circulation in the subclavian had been interrupted by the injury.

3. The positive and pathognomonic signs of arterio-venous aneurysm or varix, i. e., the continuous venous hum plus the rasping, buzzing double murmur heard with greatest intensity in the diastolic period—Broca and Wahl's signs, the intense vibratory purring thrill—*fremissement cataire*—propagated like a murmur at a great distance along the venous channels on the proximal and distal sides of the point of injury.

4. The spontaneous arrest of the bleeding shortly after the first primary hemorrhage, the absence of secondary bleeding, and, above all, the rapid subsidence of the hematoma while the intensity of the physical signs of aneurysm were increasing; the great fulness, pulsation, and distension of the cervical and brachial veins, more especially during the diastolic period—all clearly pointed, in fact, demonstrated, that the subclavian artery and vein had been simultaneously injured by the bullet, the perforation leading to the almost immediate formation of an arterio-venous anastomosis.

It also appeared to be most probable that the anastomosis was a direct one, aneurysmal varix, and not through an intermediary sac, varicose aneurysm, though this point could not be positively determined at the time in consequence of the swelling above and under the clavicle in the neighborhood of the bullet tract. There was, however, no distinct globular or especially defined swelling. There was only a general hard swelling over the supraclavicular space filling the lateral aspect of the neck as with a mass of recent exudates and extravasated products, all masked by a dense, doughy edema of the skin. At first the entire supraclavicular region appeared to expand and pulsate as a whole, all over, with each beat of the heart; but latterly, as the swelling diminished, the pulsation was more defined and distributed most intensely along the veins embedded in the mass of exudates.

TREATMENT.

Having sufficiently disposed of the question of diagnosis, we were now ready to consider the more serious problem of treatment. What were the indications furnished by this remarkable and rare lesion? If we bear in mind the fact that the patient had come to us for treatment on the fifth day after injury, and was still suffering from the shock and anemia incident to the primary injury, and that the eschar existed, we will realize that we had reason to consider the possible dangers that menaced this patient from two points of view: 1, the possibility of secondary hemorrhage; 2, the remote dangers incident to the formation of a secondary or consecutive aneurysm of the artery proper, with all its attendant train of evils and dangers. As to the immediate dangers of possible infection and secondary hemorrhage, we were soon able to satisfy ourselves that they, at least, could be safely eliminated by a careful observation of the patient's condition during the first four days that followed his admission to the sanitarium.

From the moment that the patient was admitted to the institution the injured surface was subjected to the most careful antiseptic treatment and methodical compression with bandages and ice bags. The whole region was carefully washed with potash soap and lysol solution—1 per cent.—followed by alcohol. Wet antiseptic compresses were applied, and the whole supraclavicular region and lateral surfaces of the neck were subjected to vigorous compression with a spica bandage, over which an elastic woven bandage was adjusted, and over this a large ice bag was applied. This firm elastic compression, with the addition of cold, promoted the absorption of exudates and extravasated products, and we hoped also that it would help to moderate the violence of the strain that was being constantly forced upon the veins through the aneurysmal orifice. With these simple measures, aided by absolute rest, a light nutritious dietary, consisting chiefly of milk, fruit, broths, and cereals, and other hygienic measures, the robust nature of the patient soon asserted itself. The temperature, which upon admission had oscillated between 101 and 102 F., gradually subsided, so that by the fourth day—ninth after injury—it rose no higher than 99. The pulse likewise moderated in frequency, and fell to 84-90. The discoloration of the surface rapidly diminished, the dark bluish-black area of extravasation being limited to the spot occupied by the bullet. The eschar at the wound of entrance fell off Sep-

tember 11—eighth day after injury—leaving behind a healthy, granulating surface. The pain and superficial tenderness over the neck and chest diminished daily; the edema, which had completely obliterated the clavicle and all the surface anatomy of the region, now subsided, and the clavicle was easily outlined under the thin skin. It was evident from all these signs of improvement that the danger of infection which we had first apprehended from the fever, the pain and the tenderness over the parts, could now be definitely eliminated. And as there was no oozing at the point of entrance or other warnings of secondary bleeding, I now felt encouraged to believe that this grave source of apprehension would also soon be eliminated. On the other hand, the physical signs of the aneurysm became, if anything, more pronounced as the edema of the skin subsided. The hum, murmur, and thrill became more noisy and turbulent, and could be studied to still greater advantage as the vessels approached the surface. The swelling and turgidity of the jugular and brachial veins also became more perceptible. The pulsation in the internal jugular was most striking. With every beat of the heart this vessel pulsated so forcibly and became so distended that it filled the entire suprasternal and pretracheal space, thus demonstrating that while the venous system had accommodated itself to the new conditions, and was standing the great strain imposed upon it by the sudden shunting or shortcircuiting of the arterial current, the conclusion was unavoidable that a condition of permanent overdistension and engorgement was laying the foundation for future evil. The paralysis of the arm still continued; there was a slight improvement in the movements of the arm, and the sensibility of the skin was more acute, but apart from this the arm remained lifeless and inert by the patient's side.

For the moment all fear of immediate complications could be dismissed, though we realized that fully three weeks after healing would have to elapse before we could safely state that the danger of secondary hemorrhage could be entirely eliminated.[2] As the patient resided in an isolated settlement in the country, and could not remain long under our observation, the question that arose was, "Should the patient be allowed to return home, with instructions to return again for further treatment in the event that other serious developments should follow; or was it the wiser plan to anticipate the complications and dangers that the future might have in store for him, by advising an early and radical operation that would rid him of this dangerous lesion under the most favorable conditions of surgical preparation?"

While the question involved many debatable propositions, which will be more appropriately discussed in another section of this contribution, I will state that in view of the progressive improvement in the general condition of the patient, and the probability that he would escape the dangers of secondary hemorrhage and other immediate complications, I had concluded, in accordance with the classic recommendations on the subject, that I would abstain from all operative intervention, and would allow the patient to return home after the wound had healed completely. Had I known the exact anatomic relations of the aneurysmal orifice, which were only determined at the time of the operation, I would have made a special trial of systematic digital compression over the anterior scalene after all the acute reactionary swelling had subsided. But even with the favorable position of the anastomotic orifice, which was immediately in the lowest center of the scalene tendon, it is very doubtful that this mode of treatment would have succeeded, as the clavicle was directly in the way of effective compression; furthermore, in the cases in which this method had been tried it had failed altogether, and I therefore gave it little consideration. On the other hand, the patient, who had been profoundly impressed with the gravity of his injury, reminded me insistently that he would not be able to remain in the city for observation, or to return again at some future time if complications should arise, without a great sacrifice—a greater sacrifice than his limited resources would allow. He was anxious to have something done that would be decisive and that would relieve him permanently of the worry and uncertainty of a lesion which he might tolerate in time, but would always remain a menace to his comfort and even to his life.

The dangers of a radical operation and the unusual character of such an operation were fully explained to him, but he preferred to take his chances, provided there was a reasonable prospect of recovery and permanent cure.

The determined attitude of the patient, who showed himself as fearless as he was determined, coupled with my serious misgivings as to the final outcome of the case if allowed to drift along its natural course, led me, in spite of my doubt as to the wisdom of this decision, to acquiesce to the patient's courageous appeal and to give him the benefit of the operation.

Without underestimating the difficulties that were to be encountered, I still believed that by adopting a carefully prepared and matured plan of action I would be able to overcome the chief obstacles in the way of a safe dissection of the varix and complete control of its anastomotic orifice. The main objects of the operation that were kept in view were: 1. To obtain free and easy access to the entire injured area by preliminary osteoplastic section of the clavicle from its outer third to the sternoclavicular joint, which was to be disarticulated or temporarily excised. 2. To obtain complete provisional control of the subclavian circulation by applying a temporary traction-loop upon the first portion of the subclavian or innominate artery, which by lifting the vessel from its bed would occlude the main trunk and its most important collateral branch, the vertebral. 3. To completely explore by careful dissection the point of anastomotic communication existing between the subclavian artery and vein. 4. To permanently control the subclavian artery over the distal and proximal side of the anastomosis by ligature. 5. To provisionally clamp or ligate the vein above and below the venous orifice as a preliminary to the extirpation of an intervening sac that might exist between the vessels. 6. Then, if possible, to suture the venous orifice by lateral phleborrhaphy, thus allowing the venous circuit of the upper extremity to be re-established after the removal of the temporary clamps or ligatures on the vein. 7. To restore the parts to their normal condition by wiring the divided clavicle into position. Incidentally, and as a minor feature of the operation, the bullet would be extracted.

That this desirable but difficult program would be carried out in all its details I did not fully anticipate, but I did expect to accomplish the main purpose of the operation if I once succeeded in obtaining a complete control of the innominate, and obtained a free and open field for the manipulations necessary to dissect the anastomosis. As the sequel and details of the operation show, unexpected anomalies in the arterial distribution and the freedom of the collateral supply did come near

2. See Will's case, secondary hemorrhage after healing of wound, causing death three weeks after injury.

upsetting my plans and added greatly to the perils of the patient. Nevertheless, the value of a carefully planned operation and thorough preparation for emergencies was certainly well illustrated in this case, and while it may remain a debatable question whether a procedure of this kind is justifiable in just such conditions as those described in this case, it can not be denied that the final result obtained, even at the price of a mutilation of the paralyzed hand and arm, is far more satisfactory—considering the occupation and specially unfavorable conditions under which this patient was placed—than the uncertainty of leaving this grave lesion without interference to the care of nature alone.

(To be continued.)

Clinical Report.

CASE OF ACUTE PANCREATITIS WITH FAT NECROSIS—OPERATION—RECOVERY.

WILLIAM J. MAYO, A.M., M.D.
SURGEON TO ST. MARY'S HOSPITAL.
ROCHESTER, MINN.

J. C., male, aged 59, American, was admitted to St. Mary's Hospital on June 11, 1901, with the following history:

For two years he had suffered from attacks of indigestion and at times had refrained from eating for twenty-four hours or more to obtain relief. While able to attend to his professional duties during this time, he lost 25 pounds in weight.

On June 4, was suddenly seized with agonizing pain in the epigastrium, accompanied by marked symptoms of collapse, requiring anodynes and vigorous stimulation. Vomiting and retching were frequent. The abdomen became greatly distended and symptoms of acute obstruction of the bowels developed. June 5 and 6 the condition remained about the same, temperature ranging from 100 to 102, pulse from 96 to 120. Hiccough became most distressing.

The bowels acted slightly as a result of purgation and enemata but without relief to the abdominal distention. Beginning on June 6, the stomach was washed out and rectal feeding instituted with some relief to the acuteness of the symptoms, although the main features were practically unchanged. On this date an indefinite tumor of irregular outline could be detected under the right rectus above the umbilicus, in the region of the gall-bladder. On June 7 and 8 his condition was practically unchanged, the hiccough and extreme nervous unrest being most marked.

The physical examination on admission to the hospital revealed the following:

A large, heavy man, of splendid physique, vital organs in good condition excepting for a trace of albumin in the urine. The abdomen was very tympanitic. To the right of the umbilicus and above it was an irregular, indefinite mass, apparently the size of a large fist. The temperature was 101 to 102; pulse 120, and of poor quality. Patient was very restless, hiccoughing at intervals, and having every appearance of extreme illness. There was slight jaundice. The diagnosis was gangrenous cholecystitis with probable perforation. Patient was operated on at once. The abdomen was opened through the right upper rectus, coming directly upon a greatly thickened and adherent omentum, which was infiltrated with little white or brownish spots from the size of a hempseed to that of a pea or larger. On loosening the adhesions some bloody fluid escaped from the peritoneal cavity. It was now noticed that the mesentery was infiltrated in a similar manner. The peritoneum, while reddened, was unaffected. The diagnosis of fat necrosis was evident.

Raising the omentum and transverse colon, the greatly enlarged pancreas could be felt like a pudding in a tight sac. With a small aspirating needle this was aspirated in several places, withdrawing only bloody fluid. The rectus was severed laterally and a search instituted for the gall-bladder, which was found far to the right and wholly unconnected with the tumor previously detected. The gall-bladder was greatly thickened and contained one enormous stone, the size of a small hen egg. There was also some muco-purulent material in the gall-bladder. The stone was removed and a large rubber drain inserted and sutured to the opening in the gall-bladder with a catgut suture in purse-string fashion, drawn tightly to prevent leakage. The drain was brought out of a stab wound in the right groin. A large wick of gauze was placed along with the tube into the right kidney pouch. The whole of the anterior wound was closed. Time of operation was 45 minutes.

The patient was placed in bed in extreme shock, with restlessness, muscle twitching, cold perspiration, etc. Temporary delirium developed after the anesthesia had passed away. Atropin, as advised by Crile, in this form of shock, was found most efficacious. Strychnia, rectal exhibition of saline solutions, etc., were also resorted to. At the end of 18 hours an immense drainage through the rubber gall-bladder drain commenced. It was a bloody, serous fluid with little evidence of bile. This discharge was very irritating and on examination showed pancreatic fluid and bile. The quantity was so great as to saturate a large dressing every four hours. In two weeks this irritating discharge was gradually replaced by bile of a more normal appearance, and at the end of four weeks the fistula closed. The patient, while in a most critical condition for a week, slowly regained his health, leaving the hospital in seven weeks, and he is now in perfect health, up to his usual weight, and can eat and digest normally.

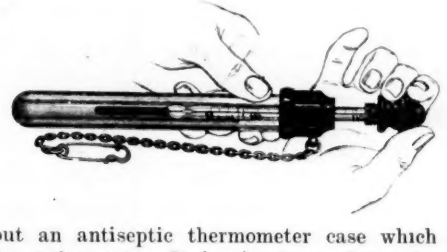
It is evident in this case that the gallstone had been the cause of a cholangitis which extended to the pancreatic ducts, with resultant acute pancreatitis and fat necrosis. The free drainage and relief of tension following the opening of the gall-bladder checked the process short of abscess formation.

The fine constitution and previous exemplary habits of the patient were great factors in the recovery.

New Instrument.

AN ANTISEPTIC THERMOMETER.

There is no doubt but that bacteria can be transmitted by the ordinary clinical thermometer, and extreme and continued care is necessary to prevent this. Ordinary washing and wiping will not suffice. The Norwich Pharmacal Co. has just



gotten out an antiseptic thermometer case which seems to meet all requirements. It is simply a glass-tube holder in which can be kept antiseptic solution without leakage and into which is screwed the thermometer as in ordinary holders. The increase in size of this over ordinary holders is so slight as to make it scarcely noticeable in the vest pocket.

War on Rats.—The cities in which the plague has made a brief appearance and then subsided, all made war upon rats as an indispensable measure. The *Brazil-Medico* is inclined to attribute the recurrence of plague at Rio Janeiro to the neglect of this measure, which was considered superfluous by the authorities. The recrudescence of the disease and the appointment of a new head of the health office has been followed by stringent measures against rats. A premium is to be paid for dead rats, and for rat dogs of a good breed, which will be bought by the municipality and distributed. Phosphorus paste is supplied on an extensive scale to the police to poison rats in sewers, docks, etc. To prevent the importing of rats to obtain the premium, the source whence the carcasses were derived must be proved.

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NATIONAL BOARD OF MEDICAL EXAMINERS.

The necessity of devising some method for overcoming the present anomalous conditions regarding the regulation of the practice of medicine in the various states becomes more evident each year. According to the analysis of the state medical laws published in THE JOURNAL for November 16, last, there were then thirty-seven states which required examinations. Last November, Rhode Island adopted a new law requiring an examination, so that to-day there are thirty-eight states and territories which demand that hereafter all must pass an examination before being admitted to practice. Besides these there are nine states in which an examination or a diploma is required and the number of colleges recognized by some of these states is quite limited .

The conditions thus created make it a serious matter for the physician who desires to remove to another state to practice; for, the best of men, after a few years, find themselves very deficient in at least some of the branches in which they would be compelled to be examined. The young graduate, while yet well up in all the fundamental branches, desires to go through the ordeal of passing all the examinations necessary to entitle him to practice in any part of his own country. But he finds this is impossible. Hence, he selects his field, conforms to its laws, enters on his life work, and soon finds himself with the great majority—rusty in many of the branches and almost compelled to stay where he is. A remedy has been suggested in reciprocity. A few of the states have already grouped together for mutual exchange of courtesies, but reciprocity will never be universal among all the states, at least not until there is a much more uniformity in legislation than now prevails or that is likely to prevail for some years. But even a uniformity of laws will not suffice; there must be a uniformity in tests and standard, which will never come because of the multiplicity of boards of examiners, the majority of which are created by political influence and not by the selection of men qualified for the positions of examiners in scientific medicine.

In place of reciprocity it has been suggested on different occasions that there be created a national board of examiners which shall have authority to grant licenses which shall be recognized throughout the country. The constitution, however, does not place the regulation of the practice of medicine among the functions of the general government, and consequently the practical carrying out of the idea of a national board is met by obstacles not easily overcome, provided the idea is to compel the recognition of certificates from such a board by the various states. The constitutional objections would not apply to such a board as we suggest below. At least, the obstacles are no greater here than in carrying out the idea of reciprocity, so-called. In either case there must be a voluntary relinquishment of rights on the part of the state, and the state can only give its examining or licensing boards the privilege of accepting the credentials of a corresponding board of another state. Without taking space to give our reasons, we believe the ultimate results of reciprocity, as now understood, would be to lower rather than to elevate the standard.

A national board of examiners is the most practical solution of the difficulties before us, and if we were to offer a suggestion it would be that such a board should be analogous to that proposed by Dr. Roddick for the dominion qualifications in Canada where they have the same constitutional difficulties to meet as we have here, although their provinces are very limited in number compared with our states and territories.

At the present time there are three Government services, to enter which it is necessary that the applicant pass an examination. These examinations are at present held by the respective services—the Army, the Navy and the Marine-Hospital. In place of these let there be created a national board of examiners, whose certificates of qualification shall be a prerequisite to candidacy for any medical position under the Government. While ostensibly this board would be created to examine those desiring to enter the medical service of the Government, practically the acknowledged object would be the creation of a body to examine applicants and to grant certificates or diplomas which should be a guarantee of a thorough and practical medical education. In number the board should consist of not less than five or more than nine; its members should receive a good salary and devote all their time to the work, the expenses to be met by the fees of applicants. The appointments on this board might be made by the President on the recommendations of the heads of the medical department of the Army, the Navy, and the Marine-Hospital Service. It is presumed that men would be selected who would be well qualified to represent the different branches of scientific medicine—physiology, pathology, chemistry, anatomy, surgery, obstetrics, etc. The examinations should in part be conducted in hospitals and laboratories so that practical and not theoretical knowledge would be demanded. No school or system of practice should be recognized, but the examination should cover all the essentials; it should be thorough and complete, and sufficiently rigid to satisfy the demands of the most exacting of the states at the present time. It is presumed that a fair standard of preliminary education will be required, as well as a degree from a reputable medical college. The board should

times, so that no great sacrifice would be necessary on the part of those who desired to take the examination. A further practical examination might be required of those entering the Government services, but the general qualifications given by the board should be also a prerequisite for any medical employment under the government, including pension boards, etc.

If such a board were created and it required thorough qualifications before one could pass its examination, which is taken for granted, it would not be long before all the states would be willing to recognize its certificate. It would place before the ambitious in our profession a chance to get a diploma that would be an honor to its possessor and that would be registrable in every state in the Union. The state boards might still exist and act for those who cared only for a state license, but any one legally possessing a United States certificate from this national board would not have to submit to a state examination on every change of residence.

We believe that this is a practical remedy for the conditions now before us, and it is offered for the consideration of our readers.

AMERICAN SOCIETY OF NATURALISTS AND AFFILIATED SOCIETIES.

The twentieth annual meeting of the American Society of Naturalists was held at the University of Chicago December 31, 1901, and January 1, 1902, and the occasion proved to be a noteworthy one in many respects. The holding of an annual meeting in Chicago, "so far west," was regarded at first as a rather uncertain experiment, but the number in attendance and the quality of the material presented showed very clearly that Chicago, for various reasons, is far from being an unfavorable place for meetings of even the most purely scientific character.

The lecture by L. O. Howard of the Department of Agriculture on "International Work with Beneficial Insects," was a good illustration of the economic value of scientific methods applied to the study of destructive parasitic diseases of various trees and plants. The annual discussion had for its subject "The Relation of the American Society of Naturalists to Other Scientific Societies." It appears that the American Association for the Advancement of Science, also a strong organization, intends to abandon its summer meetings and that a year from now there will be a large meeting of many societies in Washington. The co-relation of the various societies, the formation of central and regional societies, and the holding of general and more local meetings—in short, the most effective organization of the purely scientific societies of the country—were considered. The problem seems not at all unlike that confronting the medical profession of the United States as it seeks to advance the interests of science by means of the many societies and associations that have been formed from time to time, often without careful consideration of the evident value of centralization, affiliation and union. The annual address by Professor Sedgwick of the Massachusetts Institute of Technology on "The Modern Subjection of Science and Education to Propaganda" was of direct bearing upon medicine. Indeed, his strongest illustrations were the propagandas carried on by the anti-vivisectionists and by the advocates of instruction in "temperance-physiology" in the common schools of this country. It will probably be a matter of considerable surprise to many readers of THE JOURNAL to learn that the instruction in physiology in the common schools of most of our states is completely subjected to propagandism of the most virulent and uncompromising character. Surely this is not a safe principle to follow in education.

Among the affiliated societies, the meetings of the Association of American Anatomists, of the American Physiological Society, and of the Society of American Bacteriologists are of direct interest from the medical point of view. The meetings of these three societies were among the most successful of any so far in their history. Brief references may be permitted to some of the many papers presented before the Physiologists and Bacteriologists. Mendel and Rettger brought forward certain observations that indicate an important relationship between the spleen and the pancreas, because an extract of the spleen when added to an extract of the pancreas greatly increases the proteolytic powers of the latter. Loeb and Lewis found that unfertilized sea urchin eggs left undisturbed in sea water for a few hours become insusceptible to fertilization, but if kept in a mixture of sea water and potassium cyanid, the latter having been allowed to evaporate, the eggs may be fertilized after seven days, the potassic cyanid apparently inhibiting certain fermentative processes in the eggs that are of a distinct mortiferous nature. Loeb also advanced an electrodynamic explanation of life phenomena to take the place of the thermodynamic explanation heretofore in vogue. Pure sodium chlorid solution of the same osmotic pressure as sea water is toxic for the fertilized eggs of Fundulus, a marine fish, the toxic effect being due to the negatively charged Cl ions, which may be neutralized by small amounts of positively charged bivalent and trivalent metal ions. Mathews showed that the effect of a salt upon nerves is dependent upon the electrical charges carried by the anions of the salts. Important deductions were made in regard to the nature of nerve impulse, electrotonus, and other electric phenomena. These experiments, which may be just hinted at for the present, show again the essential rôle played by chemico-physical factors in life phenomena.

In the Society of Bacteriologists, whose deliberations were guided by Professor Welch of Baltimore, many noteworthy investigations were presented: Novy's observations on the germicidal actions of certain organic peroxids are important because of their probable therapeutic significance. It seems that certain organic peroxids have been studied whose germicidal action is exceedingly powerful but which are harmless to human

beings and similar animals—apparently just the thing wanted for the successful treatment of many infections of the intestinal tract and elsewhere. In a supplementary note on the etiology of yellow fever presented by Dr. Carroll of the Army Medical Hospital, Washington, it was shown that the virus or cause of yellow fever, contained in the blood of yellow fever patients as demonstrated by the experimental inoculations of Reed, Carroll and Agramonte, is so small that it passes through porcelain filters. Hence it would seem to belong to the group of pathogenic agents that investigators believe are so infinitesimally small that it is hopeless to expect to find them in the sense of ocular demonstration by means of our present methods. A number of other interesting and valuable observations along bacteriologic lines, both from the standpoint of pathology as well as pure or applied bacteriology, were presented, the program being filled to the limits. Suffice it to say that the proceedings of the societies referred to indicate a gratifying activity in research in the various branches represented.

THE MEMORIAL INSTITUTE FOR INFECTIOUS DISEASES.

As noted in another column of the present issue, Mr. and Mrs. Harold F. McCormick, of Chicago, have given a considerable sum of money for the establishment of an institution for the investigation and the treatment of infectious diseases. We made an announcement of this gift some weeks ago, but at that time we were not permitted to give the name of the family, or any of the particulars. The terms of the gift confine the immediate activities of the institution to scarlet fever and allied problems. A board of trustees, the majority of whom are medical men, has been appointed, an organization effected, and the preparations are under way for the carrying on of work in rented quarters. Professor Hektoen has been selected director, and this is a guarantee that the work done at the Institute will be of the highest order and of scientific worth.

In connection with the investigation into the causes and nature of scarlet fever and other similar infectious diseases, provisions are being made for the treatment in hospital of a small number of patients. All indications point strongly to the permanent establishment before long of an institute for infectious diseases in which original investigation and clinical work will go hand in hand, the one completing and aiding the other. It is hoped, of course, that arrangements may be made also for the clinical instruction of students of medicine in the acute infectious diseases of children, a desideratum that surely may be fulfilled without in any way interfering with the main purpose of the institute. The name selected, namely, "The Memorial Institute for Infectious Diseases," indicates at once the nature of some of the motives that lead to the undertaking and also the intention of the founders to secure for it permanency and comprehensiveness.

The general object of the Institute is one that appeals to philanthropist and scientist alike. No better selection of location than Chicago could have been made. We believe that this is one of the first, if not the very first, substantial and direct gift of money to scientific medicine in Chicago. It is true that much money has been given to hospitals and similar institutions in Chicago, but we recall no considerable donation before this for the direct advancement of scientific investigation. Herein lies a noteworthy significance because the McCormick donation is another welcome instance of the direct interest that private wealth is beginning to take in the purely scientific side of medicine. Less than a year ago Mr. Rockefeller gave a large sum for medical research in various centers of this country, and the recently incorporated "Carnegie Institution" of Washington, with an endowment of $10,000,000, aims also at the furtherance of scientific investigation in medicine as well as in other branches of knowledge. The opportunities for the medical investigator in this country has consequently increased manifold within a few months—a most encouraging and stimulating fact for all those that are interested in the scientific development of American medicine.

OPERATIVE TREATMENT FOR CHRONIC NEPHRITIS.

With the evolution and growth of antisepsis and asepsis, the last quarter of a century has witnessed a remarkable expansion of the field of operative surgery. The insidious transition from structural to organic disease has forced the clinician, in many instances, to invoke the early counsel, if not the operative aid of the surgeon. The former has learned that certain affections considered strictly medical have also a distinctly surgical aspect, and that if he wishes to render his patient the best service, he must be prepared for contingencies that, while they may never arise, will in the event of their development, require speedy and skilful surgical treatment. Therefore, the clinician must early have the surgeon share with him a knowledge of the details of the case, so that both may occupy common ground and be able promptly to reach an agreement as to the procedure to be followed in accordance with the conditions that may be present. It is, for these reasons, that the plan adopted by two physicians of the Pennsylvania Hospital—a clinician and a surgeon—of delivering conjoint clinical lectures on subjects that can profitably be treated from the viewpoint of each is to be commended.

The division of labor in medical practice resulting from the evolution of specialism and due to the enormous growth and progress of medical science makes it scarcely possible for the practitioner to be expert both as clinician and as surgeon. There are, however, many conditions that at different stages demand the services of both. It will not be necessary to do more than merely advert to some of these, such as appendicitis, abscess

or gangrene of the lung, visceral malignant disease, hemorrhage secondary to gastric or intestinal ulceration, perforation of the stomach or bowel, abscess or new growth of the brain, liver or spleen, cirrhosis of the liver, and so on. To this list of diseases, essentially medical primarily, but in the treatment of which the services of the surgeon are not rarely required, Dr. George M. Edebohls[1] now adds chronic nephritis. The proposition to treat this affection by operative measures is based not alone upon theoretical considerations, but also upon an experience already comprising some eighteen cases. The suggestion for such a procedure emanated from the successful results in several cases of chronic nephritis in which nephropexy was performed for the purpose of anchoring a movable kidney. Albumin and tube casts disappeared from the urine, and the patients were restored to health. By reason of this experience, Dr. Edebohls resolved to apply surgical treatment to all cases of chronic nephritis that should come under his observation. The operation consists in exposure of the kidney through the loin, with excision of its proper capsule. All of the patients thus treated are reported to have done well. The good results obtained in these cases are attributed to the development of numerous large blood vessels, particularly arteries, that develop in the strong connective-tissue adhesions that formed between the kidneys and the surrounding tissues, the blood stream passing from the latter to the kidneys. This, it is thought, leads to gradual absorption of the interstitial or intertubular inflammatory products and exudates, thus freeing the tubules and glomeruli from compression, constriction and distortion, and permitting the re-establishment of a normal circulation, with the regenerative production of new epithelium capable of carrying on the secretory function.

The proposition here thus briefly outlined is certainly a most startling one, and it is not likely to meet at once with general acceptance; but any theoretic objections to its practical application must disappear in the face of successful results in actual experience. Of course, the operation would not be undertaken in the presence of any incurable complication or any condition forbidding the administration of an anesthetic, nor should it be undertaken unless the probable expectation of life is more than a month, inasmuch as the beneficial effects are not manifested in a much shorter time.

1. Medical Record, Dec. 21, 1901, p. 961.

HEMATOGENOUS TUBERCULOSIS.

It is a well-known fact that tuberculosis of the lungs involves by preference the apices, but no explanation that has been offered is entirely satisfactory. Deficient functional activity of the portions of lung in question would seem to be in general an adequate predisposing factor. This does not necessarily imply, however, that infection takes place invariably by way of the air passages. As opposed to the view that the air is exclusively the medium through which tubercle bacilli gain access to the apices of the lung, is the report by Baumgarten[1] of experimental observations in which injections, in not too large amount, of virulent tubercle bacilli into the uninjured urethra and bladder were followed by tuberculosis of the apices of the lungs. The same result followed subcutaneous and intraocular inoculation. When large amounts of bacilli, however, are employed, or when intravenous inoculation is practiced, miliary tuberculosis is likely to result. Under these circumstances, also, the special localization of the morbid process must be attributed to the deficient functional activity of the apices, with which sluggishness of the circulation goes hand in hand, whereby tubercle bacilli contained in the blood are more readily deposited.

1. Wiener Med. Woch., Nov. 2, 1901, p. 2049.

THE PROPOSED UNITED STATES HEALTH SERVICE.

The bill that has been introduced into both houses of Congress providing for a National United States Health Service, on the basis of the present Marine-Hospital Service, and practically a continuation of the same under another name with wider functions and responsibilities, is one that deserves the careful consideration of our profession. Two facts are self-evident. One is that the present scope of the Marine-Hospital Service is far more extensive than that originally intended and that it is under present conditions constantly extending to meet the demands. The other is that while we need a public health service the still existing present limitations of the Marine-Hospital Service under its original organization are a serious hindrance to its fully meeting the country's needs. Whether what is practically a simple change of style and title will do this, may possibly be a question open to argument and it is to be hoped it will receive due consideration. The Marine-Hospital Service includes a body of trained sanitary workers whose skill and experience would be invaluable and could hardly be dispensed with, but this does not preclude the possibility that a certain amount of reorganization would be advisable if we expect to have at once the best results. It may be that it would, but it is a question worthy of the consideration of the profession. What is needed and wanted is the best that can be had, in view of the very important functions of a national health department, and nothing short of this will be satisfactory. We must not too slightingly disregard some of the already expressed ideals of the profession as to a national board of health and which are to all appearance at least hardly embodied in the proposed legislation. These may not be all attainable, but we should secure what we can, and make certain that the proposed body is such as to command the sympathy and cordial support of those who alone can make it truly effective. We publish elsewhere the text of the bill for the careful consideration of our readers.

SPLENIC ANEMIA WITH ASCITES.

Since the systematic description by Banti in 1894 of a symptom-complex comprising enlargement of the spleen, associated with anemia, and later the development of ascites, the name Banti's disease has been applied to this disorder. Three stages in the progress of

the affection are distinguished: 1, an anemic stage, characterized by enlargement of the spleen and anemia, and lasting from three or four to ten or eleven years; 2, a transitional stage, of uncertain duration; and 3, an ascitic stage, which usually terminates fatally in from six months to a year. In Banti's opinion, the spleen is the primary seat of the disease, toxic substances being generated in it as a result of some hypothetic infectious process, entering the circulation and causing anemia, and, by passing through the liver, causing hyperplasia of the interstitial connective tissue. It has, further, been suggested that the toxic substances may be derived from the gastro-intestinal tract, reaching the spleen through the circulation. The question has been raised whether cases of so-called splenic anemia or lienal pseudoleukemia with ascites and little or no cirrhosis of the liver do not also represent a variety of Banti's disease. Various influences have been made responsible for the ascites, such as cirrhosis of the liver, stasis due to enlargement of the spleen, anemia, lymphatic obstruction from enlargement of mesenteric and retroperitoneal glands; but the question must still be considered as undecided. One of the features of the disease to which little attention has hitherto been given is a tendency to hemorrhage; thus, epistaxis, hematemesis, hemoptysis, hematuria, and other forms of hemorrhage have been noticed. The skin is generally pale, although occasionally it is pigmented. The urine may exhibit little or no change, and slight fever may at times be present. In the blood, at least in the later stages, there is a deficiency in the red and white corpuscles, and in the hemoglobin. The alkalinity of the blood has also been found increased. In diagnosis, the most important consideration is the presence of chronic enlargement of the spleen not due to ordinary causes. The condition under discussion differs from spleno-medullary leukemia in the absence of hyperleukocytosis; from lienal pseudoleukemia, in the absence of a disproportionate increase in the number of lymphocytes; and in the presence of leukopenia. In treatment, splenectomy has been recommended and practiced successfully in a number of cases. Among drugs arsenic, iron and iodin have been employed.

THE BIBLIOGRAPHIA MEDICA.

The publishers of the Bibliographia Medica, the European successor to the Index Medicus, have issued a circular in which they state that unless they obtained 250 subscribers before December 31 last, at the newly raised annual subscription price of $24, they will have to suspend its publication. It would seem that there ought to be at least 250 who are sufficiently interested to pay the price, to say nothing of the public libraries to which it is so valuable. We have to remember, however, that this is only history repeating itself; the Index Medicus in its last years went through the same experience. The fact appears to be that medical literature is increasing and that the difficulty and expense of collecting and publishing its bibliography have correspondingly increased, while the number of those calling for it in its completeness is not enlarged in proportion. If the Bibliographia Medica goes under, as there seems to be reason to fear, we may conclude that what is demanded is not such a comprehensive all-exhausting bibliography, but rather a more limited and discriminating one. Much of the medical literature of the day, as indeed of all time, is ephemeral, and its preservation is, in itself, not a matter of importance. Much of it contains nothing new; some of what is novel is only error, and a great deal too much consists in duplication, triplication and still further multiplication of the repetitions of the same facts. There are authors who seem to think that reiteration is the only way to put their work before the profession and they do this so extensively and effectively that an astonishingly large amount of print is spread over a very limited modicum of fact. Sometimes the authors publish their articles unaltered in as many different publications as will receive them; sometimes they paraphrase them slightly or extensively, but make them cover the same facts. Some have a faculty of making a small amount of material go a long way and there are medical writers whose articles can not safely be briefed in summaries of current literature for this reason. When a subject becomes popular, so to speak, like appendicitis or tuberculosis at the present time, the amount of literature produced is appalling and the culling out of what is of value in it is itself a tremendous task. There is no medical or surgical subject of importance that has not its bibliography thus encumbered with a mass of papers which, while not always without an ephemeral utility as stimulants of discussion in medical societies, etc., have no lasting value and could well be spared from the literature. Their enumeration only confuses the investigator and wastes his time and energies in useless bookwork to his disadvantage. It will be a misfortune if the Bibliographia Medica is discontinued and if, as it appears may be the case, such publications can not succeed, let us hope that a less expensive and more discriminating one will have a better reception. Even if the Bibliographia Medica should cease its publication there would still be many resources for the student of medical literature remaining. What is being done in this country is well known, but it is of interest to note that similar plans of keeping up the record of local or national as well as general medical literature are being carried out abroad. The *Revista Med. del Uruguay* has undertaken the task of publishing an index of original articles appearing in its South American exchanges. The *Rousski Vratch* is doing the same for Russia. The *Deutsche* and the *Muenchener* medical weeklies review a large part of the contemporaneous field in Germany, and certain journals are accomplishing the same in their specialties for France. None of them, however, have appeared so far to even aim at the completeness with which current literature has been indexed in THE JOURNAL for the past two years. The usefulness of the German "Jahrbücher" has long been appreciated and with all the means at his command the medical worker of the present day has altogether unprecedented facilities.

Women Physicians Receive Appointments.—Miss Steinberger, M.D., has been appointed assistant in the gynecological clinic of the Budapest University, and Miss Kurtuez, M.D., demonstrator at the Institute of Physiology.

The Organization of the Medical Profession.

I.

A Statement of Facts.

The Committee on Reorganization, appointed by the American Medical Association in 1900, which reported at the 1901 meeting of the Association at St. Paul, when preparing its report attempted to gather statistics concerning medical organization, and especially as regards the number of those who belong to medical societies. Reports were received from every state, although from some the results as to accuracy were not very satisfactory, it being impossible in some of the states to more than guess at the facts regarding the number belonging to medical societies. However, basing its conclusions on more or less reliable information, the Committee concluded that the total membership of the medical societies at that time was approximately between 34,000 and 35,000.

In arriving at these figures no attempt was made to take into account those who belong to more than one society, although in some instances one individual might belong to half a dozen or more organizations. Neither was there any allowance made for those who were only nominally members, such as those who neither attended the meetings nor kept up their dues—in other words, delinquent members and those who, according to the constitution and by-laws of the various societies, should not be classed as active members. Taking into account all these and other things, it was concluded that a fair statement to make was that not more than 33,000 physicians in this country belonged to medical societies.

The number of regular physicians in the United States is unknown. Various reports are published, these varying in number from 100,000 to 120,000. Probably the mean of these, 110,000, would be practically correct. This gives us the startling fact that **there are 77,000 physicians in the United States who do not belong to any medical society whatever.**

Those who know the value of medical societies must acknowledge that the revelation is an appalling one. It is a revelation that accounts for the wretched condition that our profession is in as a body politic and as a social factor in many ways. It is jealous, antagonistic, discordant, disorganized, powerless, without unanimity of thought or action on important questions—ethical, social or scientific—without influence socially, politically, or in any other way.

What is the cause of these conditions? Why is it that not one in three physicians belong to a medical society? Does the fault lie entirely with the two-thirds, or is it a fact that for some reason our medical societies are not such as to make membership in them both available and valuable? Can existing societies better perform the functions for which they are created and be made more available for those for whom they are intended? These are important questions and well worthy of thoughtful consideration.

It is quite probable that those who have given thought to the subject would, without hesitation, say that several things contribute to the existing conditions as regards organization. The first rests with those who are not members. These are apathetic, indifferent or ignorant of the practical value of membership in medical societies.

The second is the want of medical societies in many localities so that those who desire to become members can have the opportunity.

The third rests with the societies themselves. These are not performing their full functions as organizations representing the medical body politic; as educational or scientific bodies the majority of them are not conducted for the best interests of all their members.

Accepting these propositions as true, the remedy then will be: 1, to arouse those not now members from their apathy and indifference and convince them of the value of membership; 2, to organize and encourage medical societies in every part of the country, and 3, to stimulate existing societies to more active work and, if necessary, to adopt different methods.

Possibly a consideration of the subject of organization of the profession will not be out of place in this journal, which is the mouthpiece of the great National organization of medical men whose avowed objects and principles are:

"To federate into one compact organization the medical profession of the United States, for the purpose of fostering the growth and diffusion of medical knowledge, of promoting friendly intercourse among American physicians, of safeguarding the material interests of the medical profession, of elevating the standard of medical education, of securing the enactment and enforcement of medical laws, of enlightening and directing public opinion in regard to the broad problems of state medicine, and of representing to the world the practical accomplishments of scientific medicine." (Article II of the constitution of the American Medical Association.)

(To be continued.)

Medical News.

ILLINOIS.

Bequest to Rockford Hospital.—By the will of the late Eleanor G. Fairchild, $3000 is bequeathed to the Rockford City Hospital.

Diphtheria.—The disease is raging on Campbell's Island, a few miles above Moline, and is causing great alarm there and in Watertown on account of inefficient quarantine.——Nunda has had four deaths.——The schools at Crystal Lake have been closed on account of the disease. Syracuse has five cases.

Scarlet fever has spread from Georgetown to Himrod.——The Wingard school at New Village has been closed on account of the disease.——It prevails in Decatur to an alarming extent. In October, November and December there have occurred 84 cases, against 115 cases in the same three months in the ten preceding years. The Board of Health has been appealed to.

Cottage Hospital to Open.—The Cottage Hospital, Peoria, which has been erected at a cost of $125,000, is practically completed and will be dedicated about January 15. It has 100 rooms and two large wards, and has been constructed in accordance with the most advanced sanitary knowledge. It is a model of its kind.

Smallpox.—Venice and Granite City on December 30 quarantined against Madison, where 16 cases were found. On the next day the quarantine was raised.——The disease is reported at Boulder, Kansas, Clinton, Blair and Bible Grove townships, near Flora, Beardstown, Buckhart, Sibley and Virginia.——The cost of the recent epidemic to Sangamon County was $3638.60.——Several new cases are reported at Irvington. The schools have been closed in consequence.

New State Hospital.—The new asylum for the incurable insane at South Bartonville, near Peoria, which will be thrown open before February 1, is a group of fifteen large, airy buildings. The institution has just been completed at a cost of approximately $1,000,000, and the work of furnishing is now rapidly drawing to a close. The asylum occupies a site about five miles south of Peoria, commanding a good view of the valley of the Illinois. The buildings will have immediate accommodation for about 600 insane and 100 hospital patients, but the ultimate capacity of the institution will be about 3000. Dr. George A. Zeller, the superintendent, is now on his way from the Philippines. Dr. Carriel, Jacksonville, will act for him until his return.

Chicago.

St. Luke's Hospital, in its thirty-eighth annual report, shows that 1818 patients were treated, 36.2 per cent. of whom were charity patients. Legacies of $32,000 were received during the year. The total receipts were $100,293, and the expenses $99,899. There are 21 beds supported by individuals and firms.

Personal.—Dr. Adolph Gehrmann has returned from his European trip.——Dr. Eliza H. Root, who has been seriously ill with diphtheria contracted while caring for a relative, is now convalescent.——Corinne B. Eckley has been appointed demonstrator of anatomy in the medical and dental departments of the University of Illinois.

Diphtheria Lessening.—The Department of Health reports that diphtheria claimed the fewest number of victims in the year just closed of any in nearly a quarter of a century, notwithstanding a four-fold increase of population during the period. Between 1879 and 1900 inclusive there were 19,002 deaths recorded from this disease—a yearly average of 864, with the lowest number 531 (in 1883) and the highest, 1420 (in 1895), in the fall of which year the antitoxin treatment was begun by the health department. There were less than 500 diphtheria deaths in 1901.

A Vaccination Creed.—The Health Department has issued a circular on "Vaccination and Smallpox," on the last page of which the following vaccination creed appears:

We, the undersigned, hereby publicly profess our firm belief—based upon positive knowledge, gained through years of personal experience and study of smallpox and vaccination:

1. That true vaccination—repeated until it no longer "takes"—always prevents smallpox. Nothing else does.
2. That true vaccination—that is, vaccination properly done on a clean arm with pure lymph and kept perfectly clean and unbroken afterwards—never did and never will make a serious sore.
3. That such a vaccination leaves a characteristic scar, unlike that from any other cause, which is recognizable during life and is the only conclusive evidence of a successful vaccination.
4. That no untoward results ever follow such vaccination: on the other hand, thousands of lives are annually sacrificed through its neglect—a neglect begotten of want of knowledge.

ARTHUR R. REYNOLDS, M.D., Commissioner of Health, and HEMAN SPALDING, M.D., Chief Medical Inspector.

These circulars are furnished to lodging houses, police stations, cheap hotels, waiting rooms, factories—in short, to all places frequented by numbers of people, especially of the tramp or migrant class. Attention is called to them by placards, 10x14 inches in size, which contain the text of the vaccination creed. These placards are posted in conspicuous places about the premises and a note at the bottom informs the reader that "further information as to vaccination and smallpox is contained in the "Supplement to a Vaccination Creed," copies obtainable on the premises. The placard and circular are proving of much help to the public vaccinators, and the discussions evoked by the *ex cathedra* statements of the "creed"—which it is sought to explain in the circular in simple phrase and by frequent repetition—are begetting an intelligent interest in the subject of vaccination among classes peculiarly exposed to smallpox.

Woman's Medical College.—The daily press for the last few days has contained numerous articles relating to the proposed discontinuance of the Northwestern University Woman's Medical School emanating from more or less authentic sources. There seems still to be doubt regarding the action taken by the trustees of the university in the matter. The secretary of the board, Mr. Frank P. Crandon, on January 6, presented the following "authentic statement":

1. It has been decided to discontinue said department at the end of the current scholastic year.
2. This decision is based upon purely financial considerations. The maintenance of the Woman's Medical School has resulted in such an annual deficit for several years that the university trustees do not feel justified in continuing its operations.
3. The quality of the scholastic work in said department and the attainments and professional excellence of its graduates have always been entirely satisfactory to the university authorities.
4. Neither the board of trustees nor the executive committee has expressed any opinion which is unfavorable to women adopting the medical profession. If individual trustees have announced such a judgment such opinions are to be regarded as personal matters, and not as committing the university to similar opinions or theories.
5. There is no probability that the medical work of Northwestern University will become coeducational.

MARYLAND.

Health Officials Feast.—The officials of the Baltimore Health Department held a banquet on December 30. Speeches were made by the Mayor, Health Commissioner Bosley and Assistant Health Commissioner C. Hampson Jones.

State Aid Asked.—There are 101 institutions asking aid of the state, the total amount asked being $1,846,840. The applications vary from $1000 to $138,000, the latter sum being asked by the Springfield State Hospital for the Insane. Johns Hopkins University applies for $100,000.

The Municipal Hospital Commission, of which Dr. William H. Welch is chairman, has determined to ignore the protests against the building of the Infectious Disease Hospital on the site selected just beyond Druid Hill Park, and if the title be clear to go ahead with the purchase and erection of the building, which is so urgently needed.

The mortality of Baltimore for the week ended January 4, was 183,—102 males and 81 females. The principal causes of death were tuberculosis, 22; heart disease, 21; pneumonia, 22; Bright's disease, 19; cancer, 5; typhoid fever, 3, and diphtheria 1. The births were 333, which is accounted for by the fact that many physicians report births only at the end of each month.

Personal.—Dr. Ira Remsen, of Johns Hopkins University, was elected President of the American Chemical Society at its recent session in Philadelphia.——Dr. J. C. Coggins of the Maryland Hospital of the Insane, sailed for Europe, January 4.——Dr. Herman Westphal, formerly of the staff of the City Hospital, has returned from Europe.——Dr. Jackson Piper is in Naples.——Dr. William Turner Wooten, late on the staff of the Maryland Hospital for the Insane, Catonsville, has been appointed Assistant Surgeon, U. S. Army.

Smallpox in Baltimore.—Baltimore has been particularly fortunate with regard to the smallpox. With one exception all the cases during the past year have been imported. Prompt handling—hurrying the patient to quarantine, vaccinating all those exposed, quarantining infected houses, and destroying infected clothing—has prevented epidemics. During the year the vaccine physicians have examined 17,034 arms and vaccinated 14,385 persons. The department has given particular attention to the inspection of food products, as all milk arriving here or sold, markets, provision stores, bakeries, live stock, stables. Plumbing and drainage are systematically examined; all drinking water is inspected; also coal used by the city, etc.

Tuberculosis Commission.—In his message to the legislature the Governor, after pointing to the large mortality from tuberculosis during the past year, and the small provision made for the accommodation of consumptives, says: "I earnestly recommend for your favorable consideration the advisability of creating an unpaid commission to inquire into the presence of tuberculosis in the state, and to devise some means of dealing with it more economically and efficiently than at present. A sufficient sum should be appropriated to pay the expense incurred by said commission in making the investigation." He also recommends "that the duties of the local boards of health be defined and a uniform plan of organization and procedure be provided so that there may be no conflict of authority or divided responsibility in case of emergency."

NEW YORK.

Hospital Endowed.—The Brooks Memorial Hospital, Dunkirk, has just received an endowment of $100,000 from Mr. and Mrs. Frederick Stevens.

State Mortality.—There were 9309 deaths in this state during November. The Bulletin of the Health Department says concerning smallpox in New York State: "Smallpox has materially decreased since summer, causing ten deaths in September, eleven in October, and nine in November. Six of the deaths occurred outside of the city of New York, one in Buffalo and one in Lockport. During the month it has existed at Syracuse and vicinity; Rochester, Buffalo, Lockport, Utica, Schen-

ectady, Elmira, Binghamton, White Plains and elsewhere. At this time, the end of December, it prevails at Buffalo, Watertown, Middleton, Binghamton and Newburg."

Anti-Tuberculosis Crusade.—Sullivan County is instituting a vigorous crusade against the admission of tuberculous patients. The Liberty Board of Health has passed an ordinance imposing a fine of $50 for maintaining a hospital or sanitarium for consumptives within the village limits. The Board of Health of the town of Rockland has just adopted an ordinance imposing a fine of $50 on any resident of the town for keeping or harboring a consumptive who is not a member of the family or dependent on them for support. The Board of Health of Monticello has instructed real estate agents to discriminate against consumptives in renting property. At the Loomis Sanitarium for consumptives established four miles from Liberty, through the generosity of J. Pierpont Morgan, hundreds of consumptives are unable to secure admission.

Buffalo.

Personal.—Dr. George W. Grabenstatter has been appointed a contract surgeon in the U. S. Army and has been ordered to the Philippines.——Dr. Conrad Diehl, who has been mayor of Buffalo for the past four years, will henceforth devote his entire attention to his private practice.

Appropriations.—The Committee on Charitable Institutions of the Board of Supervisors recommend that the following amounts be appropriated to hospitals as follows: Buffalo Eye, Ear and Throat Hospital, $1800; German Hospital Dispensary, $1500, and Buffalo Eye and Ear Infirmary, $2200.

Smallpox Progress.—At the present time there are 46 smallpox cases in the Quarantine Hospital and since it proves entirely inadequate to the new cases, Health Commissioner Wende and the newly appointed Health Commissioner Green are devising means for a temporary enlargement of the hospital.

Presentation to Dr. Wende.—Health Commissioner Wende, on completion of his ten years of public service, was presented with a valuable silver service, by his co-workers in the Health Department. The presentation speech was made by City Chemist Herbert Hill, who spoke of the many advances made in the department under the guidance of Dr. Wende. In appreciation of his services as Health Commissioner, a banquet was tendered him at the Ellicott Club, January 4, at which a beautiful loving cup was presented to him. Dr. Charles Cary was toastmaster and Mr. George P. Sawyer made the presentation speech.

New York City.

The Society of the Lying-in Hospital, which has been in existence since 1798, came into possession on the first of the new year of the model million-dollar maternity hospital built for it by J. Pierpont Morgan. It is eight stories high, and has 200 beds.

New Adjutant General.—Dr. Nelson H. Henry, who has represented the 5th District in Assembly for the past three years, has been appointed by Governor Odell to be Adjutant-General of the National Guard. He is now chief surgeon of the staff of Gen. Roe with the rank of colonel. He served as a division surgeon during the Spanish war.

Deaths in 1901.—Out of the 70,808 deaths reported to the Health Department during the year 1901, 8295, or more than one-tenth, were on the records of the morgue. There were 3219 bodies of infants and children under five years consigned to the morgue, but this large number is to be explained by the many deaths occurring at birth in families too poor to bury the little waifs. Last year there were 3857 deaths by accidents, 701 suicides, 105 homicides and 1273 victims of sunstroke. The last item is particularly interesting when contrasted with the 315 deaths from the same cause in 1900. Pneumonia was reported to have caused 9128 deaths and tuberculosis 9396 deaths. While there were only 178 deaths from typhoid fever reported in 1900, there were 729 in the year just closed. The total death rate for 1901 was 20.02 per thousand. There were 80,735 births, or an excess of more than 10,000 over the number of deaths.

PENNSYLVANIA.

Memorial Bed Endowed.—Mrs. Hannah M. Wright, Washington, D. C., has given $5000 for the endowment of a bed in the Wilkesbarre City Hospital in memory of Colonel Wright, his first wife, Mrs. Eliza Jones Wright, and their son Joseph B. Wright, assistant surgeon-general, U. S. A., who died last October. Both Col. Wright and his son were born in Wilkesbarre, and started the practice of medicine in that city.

Smallpox.—Two new cases have developed at Marcus Hook.——A second physician of Frankford has come down with the disease.——On account of a case in a boarding house at Lebanon, 40 inmates were held in quarantine.——From McKean Township 9 cases are reported.——Lebanon has 34 cases.——At Hofer 3 cases are reported.——Figart reports 20 cases.——A case is reported from Wyomissing.——New Castle has 7 cases under quarantine.

Shenango Valley Hospital, New Castle.—At the annual meeting, Dr. Thomas J. Blackwood was elected president of the staff; Dr. Charles A. Reed, vice-president, and Dr. John Foster, secretary and treasurer. The new medical staff consists of Drs. Albert M. Cook, Thomas J. Blackwood and Harry Wilson; the surgical staff, of Drs. Lewis O. Phillips, Harry W. McKee and Samuel W. Perry. The hospital received $429.54 as its share of a benefit concert recently held.

Hospital Moved.—The East End Hospital, Pittsburg, has been moved to the new building on the Finley property at the Beechwood boulevard and Frankstown avenue, which the Sisters of Charity, who have charge of the hospital, purchased from the Finley estate several months ago for $100,000. Since the property was purchased, a new addition of about 14 rooms has been made to the Finley homestead, now giving the hospital accommodations for about 28 patients. The hospital property is known as Silver Lake Grove and contains six and three-fifths acres. On this site the new East End Hospital building is to be erected at a cost of $500,000.

Philadelphia.

Bequests.—By the will of the late George W. Farr, among many bequests to charity were the following: To the Rush Hospital for Consumptives, $5000; to the Pennsylvania Hospital, $10,000, the income to be applied toward ameliorating the condition of the insane poor, by establishing two free beds; for the use of the Wills' Eye and Ear Hospital, $5000; to the Philadelphia Home for Incurables, $5000; and to the Polyclinic Hospital, $2000.

Smallpox in Philadelphia.—There were 90 new cases of smallpox and 16 deaths recorded for the week ended January 4. The record is not considered unfavorable, considering the fact that cold weather has prevailed. During 1901 there were in the city 1159 cases of smallpox and 156 deaths, a mortality of 13.45 per cent. Within the week 5 cases were taken from the Philadelphia Almshouse to the Municipal Hospital. There are about 5000 inmates at the former institution, almshouse, hospital and insane department included, and the place has been put under strict quarantine, and only sick, crippled or insane are now admitted. So far, the disease has appeared in one ward only, and it is believed that further spread may be prevented.

GENERAL.

Benguet to be the Mountain Sanitarium of the Philippines.—The Philippine government has purchased 80 acres near Bagnio, the capital of the Province of Benguet, on which is to be erected a sanitarium. Buildings are to be arranged for reception of sick soldiers. "The high altitude, the bracing temperature never above 80 F., the delicious drinking water, the valuable mineral and hot waters, the gorgeous scenery and the abundant products of the soil, both vegetable and mineral," were interestingly described in THE JOURNAL of Oct. 13, 1900, by Assistant-Surgeon J. C. Minor.

The American Gynecological and Obstetrical Journal.—We regret to read in the December issue of this journal that it is to be discontinued. Dr. Emmett has given us a splendid journal; it represented the best in gynecology and obstetrics, and deserved more encouragement than it seems to have had. He has always advocated that which is for the best interests of the profession. Evidently the cause for the discontinuance is a financial one. In the editorial announcing the discontinuance, Dr. Emmett says: "The Journal to-day shows on its credit sheet a balance due from subscribers and advertisers over and above all indebtedness and expenses. It shows also that during the past ten years over 5000 subscribers have received and contracted to pay for this journal and have never paid. It shows further that over $30,000 have been lost through unpaid subscriptions by contracts freely entered into by medical men. During this time the expenses of the journal had to be met monthly in cash."

Biometrika.—The first issue of a new, and in its way unique, high-grade biologic publication, *Biometrika*, has come to hand.

Its purpose is announced to be the collection of "biological data of a kind not systematically collected or published in any other periodical," and also of "spreading a knowledge of such statistical theory as may be requisite for their scientific treatment." It is to be a special organ of those workers, not so numerous at the present time, but increasing, who study statistical questions of biology, such as those raised by the problems of evolution, inheritance, etc. The term Biometry is not a new one, but as a semi-medical specialty it is novel to most of us. The application of mathematics to the problems of life, however, is to be, it seems, a factor in the future development of biologic science and this publication is an evidence of this. Its articles are formidable to the average reader, who is not any too familiar with complex algebraic formulæ, but he can appreciate the results when given in plainer language and their application and suggestiveness is apparent. The new journal has as its editorial staff, Professors W. F. R. Wildon, of Oxford, Karl Pearson, of London, and C. B. Davenport, of Chicago, with the well-known author, Francis Galton, as consulting editor. These form the scientific partnership of biologists, mathematician and logical generalizer that, according to the latter, such work requires. It is issued from the University Press, Cambridge, England, in handsome small quarto form, appearing quarterly. It ought to have a cordial reception not only from biologists but also from that considerable class of economic biologists, the actuaries, upon whose field it also largely trenches.

Memorial Institute for Infectious Diseases.—In THE JOURNAL for November 16, we announced that one of the wealthy families of Chicago was arranging to endow in a most liberal manner an institute for the study and scientific investigation of infectious diseases. We were not at that time permitted to give the particulars, but stated that the gift was second in importance only to that made by Mr. Rockefeller. We are not at the present time permitted to give the definite amount, but it is very large. The institute is founded by Mr. and Mrs. Harold F. McCormick in memory of their son, John R. McCormick, who died of scarlet fever last year. The object of the institute is the study of infectious diseases, but scarlet fever, its cause and specific treatment will be the primary and chief work of research. The institute is sufficiently endowed to enable those engaged in the task to maintain a number of free beds for scarlet fever patients and to operate a suitable laboratory for pathologic, bacteriologic and animal experimental work. Dr. Ludvig Hektoen has been appointed director of the institute and has selected as one of his assistants Dr. George H. Weaver, of Chicago. For the present the medical members of the board of trustees will be the attending staff. The trustees appointed by Mr. and Mrs. McCormick to manage the institute are Drs. Christian Fenger, Ludvig Hektoen and Frank Billings, and Messrs. Charles L. Hutchinson and Stanley McCormick, the latter a brother of one of the donors. The officers of the board of trustees are Dr. Frank Billings, president; Stanley McCormick, vice-president; Ludvig Hektoen, secretary, and Charles L. Hutchinson, treasurer. The institute has been incorporated and preliminary work already commenced.

The Proposed National Health Service.—The following is the text of the bill introduced in Congress:

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress Assembled, That the United States Marine-Hospital Service shall hereafter be known and designated as the United States Health Service, and the supervising surgeon-general and the officers now or hereafter commissioned under the act of January 4, 1889, entitled "An Act to regulate appointments in the Marine-Hospital Service of the United States," are hereby designated as the surgeon-general, surgeons, passed assistant surgeons, and assistant surgeons of the United States Health Service; and the salaries and allowances of said officers, the surgeon-general excepted, shall be the same as now allowed by regulations of the Marine-Hospital Service. Acting assistant surgeons, hospital stewards, and employes shall be continued in employment under the United States Health Service, and shall be employed hereafter under the regulations of said service. Nothing in this act shall be held or construed so as to discharge any officer or employe now serving in the Marine-Hospital Service or to deprive any officer of his commission. The care of sick and disabled seamen and all other duties now required by law to be performed by the Marine-Hospital Service shall hereafter be performed by the United States Health Service, and all funds and appropriations now provided by law for use by the Marine-Hospital Service and all properties and rights pertaining to said service are hereby made available for use, for like purposes and in like manner, under the Treasury Department, by the United States Health Service.

SEC. 2. That the salary and allowances of the surgeon-general of the United States Health Service shall be the same as now allowed by law to be paid to the surgeon-general of the army.

SEC. 3. That commissioned medical officers, when detailed by the surgeon-general for duty in the United States Health Bureau at Washington, District of Columbia, in charge of the administrative divisions thereof, namely, marine hospitals and relief, domestic quarantine, foreign and insular quarantine, personnel and accounts, sanitary reports and statistics, and scientific research, shall, while thus serving, be assistant surgeons-general, United States Health Service, but their pay and allowances shall be the same as now provided by regulations of the Marine-Hospital Service for officers in charge of said divisions; and the senior officer thus serving shall be the assistant within the meaning of section one hundred and seventy-eight, Revised Statutes of the United States.

SEC. 4. That the President is authorized, in his discretion, to utilize the United States Health Service in times of threatened or actual war, and the commissioned medical officers of said service, while thus serving, or while serving on boards or otherwise brought into official relations with medical officers of the army or navy, shall have rank as follows: The surgeon-general ranking with and after the surgeons-general of the army and navy; assistant surgeons-general ranking with and after assistant surgeons-general of the army and medical directors of the navy; surgeons with and after surgeons of the army having rank of major, and of the navy having rank of lieutenant-commander; passed assistant surgeons with and after assistant surgeons of the army having rank of captain, and of the navy having rank of lieutenant; assistant surgeons with and after assistant surgeons of the army having rank of first lieutenant, and of the navy having rank of junior lieutenant.

SEC. 5. That there shall be an advisory board for the hygienic laboratory provided by the Act of Congress approved March 3, 1901, for the purpose of conferring with the surgeon-general of the United States Health Service relative to the investigations conducted in said laboratory. Said board shall consist of the surgeon-general of the army, the surgeon-general of the navy, the chief of the Bureau of Animal Industry of the Department of Agriculture, and the director of the said laboratory, who shall be *ex-officio* members of the board and serve without additional compensation; and five other members, to be appointed by the Secretary of the Treasury on recommendation of the surgeon-general of the United States Health Service, who shall be skilled in laboratory work in its relation to the public health, and not in the regular employment of the government. The said five members shall each receive compensation of ten dollars per diem while thus serving, together with allowance for actual and necessary traveling expenses and also hotel expenses while in conference, said conferences not to exceed ten days in any one fiscal year. The period of service of the first five of the members not in the regular employment of the government shall be so arranged that one member shall retire each year, the appointments thereafter to be for a period of five years. Appointments to fill vacancies occurring in a manner other than as above provided shall be made for the unexpired term of the member whose place has become vacant.

SEC. 6. That the President shall appoint and commission one chemist, one medical zoologist, and one pharmacologist whenever in the opinion of the surgeon-general commissioned medical officers of the United States Health Service are not available for this duty by detail, who shall be in charge of the divisions, respectively, of chemistry, zoology and pharmacology of the hygienic laboratory, and shall each have the pay and emoluments of a surgeon of the United States Health Service and be subject to the regulations of said service. The director of the said laboratory shall be an officer detailed from the corps of commissioned medical officers of the United States Health Service as now provided by regulations for such detail from the Marine-Hospital Service, and while thus serving shall have the pay and emoluments of a surgeon.

SEC. 7. That when in the opinion of the Secretary of the Treasury the interests of the public health would be promoted by a conference with the State or Territorial boards of health or health authorities, the District of Columbia included, the surgeon-general of the United States Health Service is hereby authorized, with the approval of the secretary, to invite one or more of said boards of health or authorities to send delegates, not more than one from each State or Territory and District of Columbia, to said conference, and when thus convened said delegates shall be entitled to reimbursement for their necessary expenses of travel and of maintenance not exceeding five days at the place of conference, in accordance with such regulations as may be made by the Secretary of the Treasury.

SEC. 8. That to provide uniformity in the registration of mortality, morbidity, and vital statistics it shall be the duty of the surgeon-general of the United States Health Service, after conference with the State boards of health, to prepare the necessary forms for the collection and compilation of said statistics, and said statistics, when transmitted to the United States Health Bureau on the approved forms, shall be compiled and published by the United States Health Service as a part of the health reports published by said service.

SEC. 9. That the President shall from time to time prescribe rules for the conduct of the United States Health Service. He shall also prescribe regulations respecting its internal administration and discipline, and shall prescribe the uniforms of its officers and employes; and the surgeon-general shall transmit annually to Congress, through the Secretary of the Treasury, a report of the transactions of said service.

CANADA.

The Smallpox Situation in Montreal.—Smallpox is decreasing in Montreal, there being now only 45 patients in the Civic Hospital. There have been 71 cases altogether, and at the present time there are 19 houses in quarantine.

Montreal General Hospital.—In the month of December there were admitted into the various wards of the Montreal General Hospital, 175 patients; discharged, 159; deaths, 13; average daily sick in residence, 159. There was a falling off in outdoor consultations and minor operations.

The Smallpox Situation in St. John.—It is expected that the outbreak of smallpox at St. John, N. B., will be stamped out in a short time. There are to-day less than thirty persons in quarantine, and one-half of these have recovered. In the three months since the disease manifested itself, there have been 98 cases with 22 deaths.

Toronto's Vital Statistics.—The following are the vital statistics for Toronto for 1901: Births, 4445; marriages, 2148;

deaths, 3438. Compared with last year the figures show 85 fewer births, 359 more marriages and 166 fewer deaths. The annual number of births recorded each year for the last nine years is as follows: 4064, 4201, 4131, 4246, 4046, 4122, 4007, 4530, 4445.

Eddyism Cases Should Be Reported.—Another death under Eddyite treatment was examined into before a coroner's jury in Toronto last week. In returning a verdict the jury recorded their opinion that means should be taken to compel those practicing Eddyism to report each and every case to the sanitary authorities in order that the necessary precautions should be taken to prevent the spread of contagious diseases.

Canadian Journal of Medicine and Surgery.—The fourth annual dinner of the editorial staff of this journal was held in Toronto during the past week, Dr. W. A. Young, the business manager, presiding. Crown Attorney Curry, in responding to the toast of the legal profession, hoped to see legislation soon passed which would effectually rid the city of quacks, fakirs and such-like which have infested this city too much of late.

Fakirs Infesting Toronto.—Toronto seems to be overrun with palmists, osteopathists, Eddyites and other "healers" at the present time, if one is to judge from the almost daily prosecutions in the police court. One of the latest frauds exposed is what is known as the "Radiant Health Circle." One could travel in on one of the rays for the usual dollar. Two of these have been convicted of obtaining money under false pretenses and are at present awaiting sentence.

Insane in Toronto Gaol.—In the recent presentment of the Grand Jury of the County of York, Province of Ontario, mention is made of the fact of there being 60 lunatics confined in the Toronto Gaol. The report continues that the hospitals are also crowded, and it would appear as though the city had outgrown accommodation for these classes of the community. In the House of Providence, 60 consumptives are being attended to. This was the only charitable institution which would provide for the latter before popular demand opened the hospitals again to the consumptive.

Toronto Clinical Society.—The regular meeting of the Toronto Clinical Society was held on the evening of the 3d inst., Dr. J. F. W. Ross presiding. Dr. George A. Peters reported three cases. The first was a case of esophagostomy in a young man who, while in the act of drinking a cup of tea, swallowed a dental plate with one tooth from the middle of the upper row. Other means failing for its extraction, an operation was performed along the left frontal border of the sternomastoid. The plate had become lodged just above the cricoid, the two lateral prongs being caught transversely in the walls of the esophagus. The patient made an excellent recovery. Dr. Peters showed a phosphatic calculus weighing 6 ounces, extracted suprapubically, and described his method of cutting calculi.

Personals.—At an open meeting of the Pathologic Society of Toronto, held on the evening of January 4, Dr. J. George Adami, of McGill University, was present and read a paper on the "Classification of Tumors."——Dr. W. H. Drummond, of Montreal, the author of "L'Habitant" and other poems, will deliver the opening lecture of the University Saturday Lectures at Toronto on January 18.——Surgeon-Major Duff, of Kingston, will accompany the Third Contingent from Canada for service in South Africa, as assistant surgeon.——Dr. William J. Abbott, of Brockville, who is at present taking a post-graduate course in England, has been offered and has accepted a professorship at Cornell University, and will return this month to enter on his new duties. Dr. Abbott is a graduate of Toronto University.——Dr. Doughty, of Quebec, has been appointed joint librarian with Dr. Dionne, of the legislative library of the province of Quebec.

FOREIGN.

Professor Virchow Injured.—On January 5, as Professor Virchow was alighting from a Berlin street-car, he fell and the right femur was broken.

Surgeon-General von Leutholdt has been appointed a salaried professor in the medical faculty of the University of Berlin. He thus succeeds the late Surgeon-General Kohler likewise in the university.

Suspension of the "Klinitchesky Journal."—The suspension of this medical journal, published monthly at Moscow during the last three years, is announced. It contained several features that will be much missed.

A Million Dollars for Tuberculosis Sanitarium.—Sir Ernest Cassel, merchant and financier, has placed £200,000 at the disposal of King Edward, to be devoted to the erection and maintenance of a sanitarium for tuberculous patients. The king has appointed the following physicians as an advisory committee: Sir William Henry Broadbent, Sir Richard Douglas Powell, Sir Hermann Weber, Sir Francis Laking and Dr. Charles Theodore Williams.

New Russian Medical Weekly.—The first number of the *Roussky Vratch* is an imposing journal of 48 pages and nearly a dozen separate departments. Seven pages are devoted to an indexed review with brief summary of the medical periodicals of Europe, England and America and also of theses presented at the Russian universities. As our readers remember, the *Vratch*, published at St. Petersburg, is discontinued this year, according to the will of its founder, Dr. Manassein, and this new periodical will take its place, with several new features. Professor Podwyssotzki, of Odessa, and Dr. Vladislavleff, of St. Petersburg, are the editors.

LONDON LETTER.

The Smallpox Outbreak Still Progressing.

The outbreak of smallpox still continues to progress. There are now 569 cases in hospital. The Metropolitan Asylums Board—a body which manages the fever hospitals—takes a very gloomy view of the outlook. A feeling of uneasiness exists that London may be on the eve of a visitation of greater magnitude than has been experienced for many years. The accommodation now existing consists of hospital ships with 250 beds, two hospitals containing respectively 1000 and 190 beds, and one in course of erection containing 300 beds—total, 1740 beds. Another hospital of 94 beds is in course of erection, but is not sufficiently advanced to be regarded as an available resource. The erratic behavior of smallpox, its sudden fluctuations and the unforeseen rapidity with which it sometimes progresses, constitute the real danger and baffle all efforts to provide an estimate. The Board, after careful consideration, has come to the conclusion that not fewer than 2500 beds should be the minimum, which should be forthcoming in the next few months, i. e., 1000 more beds should be provided. Instructions have been given to architects to immediately prepare schemes for further hospital construction at an estimated cost of $85,000.

Vaccination and the Outbreak.

It has been pointed out in THE JOURNAL that the great neglect of vaccination is largely responsible for the outbreak. Analysis of the statistics of the cases which have occurred is instructive, though it only confirms the well-attested value of vaccination. Since May, 349 cases have ended either in recovery or death. Of these 116 were fatal. The death-rate in the unvaccinated was thrice that in the vaccinated. The patients under the age of 5 were all unvaccinated; there were 23 with 19 deaths. The patients under 10 were all unvaccinated except one. Here out of 42 cases, 29 were fatal, and all those who died were unvaccinated. There were 81 cases in patients under 15, and 38 deaths; 57 of the 81 were unvaccinated. Of the 38 who died only one was vaccinated; so that of the 24 who were vaccinated, 23 came safely through the disease.

How London Copes with Infectious Diseases.

A description of the method of dealing with infectious disease of this vast metropolis, of over 5,000,000 of people, should be of special interest at the present time, as smallpox is now prevalent. The Metropolitan Asylums Board system is of its kind probably the finest organization in the world. It dates from 1867, when it was instituted to relieve the Guardians of the Poor of the care of imbeciles and fever patients who could not properly be treated in workhouses. It consists of 72 members, 54 of whom are elected by various boards of guardians, and 18 by the Local Government Board. They spend $3,500,000 annually and provide 5 services: 1, infectious hospitals; 2, ambulance service; 3, imbecile asylums; 4, training ships, and 5, state-supported children. The infectious hospitals number ten, and contain 4421 beds; in addition there are two hospitals for convalescents, containing 1464 beds. There are also the smallpox hospitals, which have been described above. All the hospitals are as well equipped as any in the world. There are six ambulance stations on land, each containing a staff, male and female, harness rooms, coach houses, stables, carriages, etc. In a case of infectious disease the doctor writes out a certificate stating its nature and all particulars, as to address, age, sex, etc. These particulars are sent by telephone to the nearest ambulance station, and almost as smartly as the fire brigade turns out, an ambulance, containing a trained nurse, is dispatched to the patient's house. If the patient is over the age of 10, a male attendant is also sent. Restoratives and refresh-

ments are carried in case they should be required for prostrate patients. The ambulances are most carefully constructed, and if necessary, are kept warm. Smallpox cases are taken to a wharf on the river, of which there are three, where they are met by one of the four paddle-wheel ambulance steamers. One of the latest built of these steamers is a steel vessel 143 feet long, 22 feet in breadth, with a five-foot draft, and 263 tons displacement. It is beautifully fitted up for the conveyance of 52 patients in a recumbent position. The steamer proceeds down the river at 14 knots an hour, the voyage occupying one and a half to two hours. During the years 1884 to 1899, over 16,000 patients have made this journey. The hospital ships occupy an isolated position in Long Reach, nearly 17 miles from London Bridge. An adjacent portion of land has been purchased, on which there has been built a laundry, accommodation for nurses, and an engine and dynamo house for electric lighting. The isolation of the patients in these floating hospitals has had immense advantages, but there are certain disadvantages, not the least of which is the liability to injury from passing craft in foggy weather, and the disastrous results likely to follow a serious outbreak of fire.

A Medical Hero.

A sad tale of the heroism of a physician in his medical work has riveted the attention not only of the profession, but of the whole people. Dr. William Smyth was dispensary physician of a district in Donegal, Ireland, which includes the Island of Arranmore, about four miles from the mainland. Its inhabitants are very poor peasants, with little notion of sanitation. An outbreak of typhus fever occurred among them. Owing to the terror inspired by the disease, Dr. Smyth could obtain no help in fighting against it. Alone each day he rowed in his boat across the stormy waters of the sound to the island. Alone he tried to perform the duties of both nurse and doctor for the sick in their miserable homes. He decided that the only chance of recovery lay in removing the patients to the mainland. But the fishermen were afraid to help him. Dr. McCarthy, government medical inspector, arrived on the scene. The two physicians brought the patients ashore in a leaky boat. The patients all recovered, but Dr. Smyth contracted the fever and died. He left a widow and eight children unprovided for. But a committee has been formed of the Ulster physicians and other influential persons to collect subscriptions for his family, and the movement has spread to England. Already it is evident that a generous response will be made to the appeal, and that his family will not suffer monetarily by his heroic devotion to duty.

Correspondence.

Official Control of Antitoxins and Vaccines.

CHICAGO, Jan. 2, 1902.

To the Editor:—The paper of Dr. Dock on "Smallpox and Vaccination" and the editorial comment thereon, "The Vaccination Question," in THE JOURNAL of December 21, following so closely the antitoxin episodes, suggests more forcibly than ever the necessity for some authoritative method of inspection and control of these remedial agents.

As has been observed, in the absence of some form of supervision or restriction by the National Government on the manufacture and sale of these biologic products the medical profession through its National Association should take the initiative and provide some means whereby the absolute identity, purity and degree of potency of at least these delicate and variable organic preparations will be assured beyond peradventure.

As is well known, the United States Pharmacopeia is now undergoing the eighth decennial Revision by a National Committee of Physicians, Chemists and Pharmacists. While this committee has recognized the desirability of admitting sera and similar products, the lack of any method within reach of ordinary pharmaceutic practice whereby their identity, purity and degree of potency may be confirmed, has been a well-nigh unsurmountable obstacle and their admission consequently held as contrary to the principle upon which Pharmacopeias have been constructed the world over since their inception.

The pharmaceutical profession, including the manufacturers, is no less anxious than the physicians to secure that uniformity in these agents which shall render their administration safe and the confidence in their efficacy by the public be maintained paramount. It naturally turns to the Pharmacopeia, since the U. S. Ph. is the only legal standard authority for medicines in every state in the Union, as well as in the medical branches of the National Government.

In view of the transcendent importance of this question it is believed that the time has now come when the American Medical Association should constitute a committee to confer with the National Committee of Revision of the U. S. Ph. for the purpose of creating a Bureau or some central authority for the inspection and control of antitoxins and vaccines. Possibly some arrangement could be made with the Bureau of Animal Industry or similar related institution.

The question of antitoxins has been solved in Germany by introducing it in the Pharmacopeia and prescribing certain rules for its examination and sale through a central controlling laboratory in Frankfurt on the Main.

The following is the introductory to the text:

Serum Antidiphthericum—Diphtheric-Heilserum.
Arzeneibuch für das Deutsche Reich (1900).
Pharmacopœia Germanica, Editio IV.

Blood Serum from horses which are immune against diphtheria. Derived from accredited manufacturing places after it has been tested for its immunizing unit-contents, absence of germs and amount of preserving agents (phenol or tricresol) and has been approved for sale by the Royal Prussian Institute for Experimental Therapy in Frankfurt on the Main.

It occurs in liquid and in solid form. In either form this Serum must be dispensed in vials only, with the official hermetic seal, with the name and place of manufacture.

Stating: The antitoxin contents of one cubic centimeter, the total contents of one vial, the control number and the day of its official examination.

These vials are packed so as to exclude the light; in packages which also give the above mentioned information.

The seals bear on one side an eagle or a lion. The other side gives the number of the total contents of immunizing units, I. U. (I. E. Immunizirungs-einheiten.)

Hoping that THE JOURNAL, through the great Association it represents and the medical profession in general, will take this matter into consideration at once, I am, very truly,

C. S. HALLBERG,
Secretary Section Materia Medica, Pharmacy and Therapeutics; Member of Committee of Revision of the U. S. Ph.

Administration of Immunizing Serum by Mouth.

ST. LOUIS, MO., Jan. 6, 1902.

To the Editor:—I notice in THE JOURNAL of Jan. 4, 1902, an editorial headed: "The Administration of Immunizing Serum by Mouth," in which remarks in a little paper of mine published lately are commented upon in such an incorrect way that I can not refrain from asking you to insert this.

You certainly glanced only superficially at my paper; otherwise you would have found that I did nothing but assert that a still greater number of tetanus cases would have occurred during the late accident had not the tetanus toxin containing diphtheria antitoxin been administered by the mouth; so that in some and the same family the diphtheria patient injected subcutaneously died of tetanus, while the other members of the family immunized by "taking the serum per os escaped." I fail altogether to see how you have arrived at the idea that I had observed any effect of this internal administration of the serum other than negative.

As to the scientific side of the question of administering antitoxin by mouth, I would direct you to Römer's paper in the *Berl. Klin. Wochenshr.*, No. 46, 1901. C. FISCH.

[The editorial was based, so far as concerned our correspondent's paper, on the following passage: "In at least fifteen cases the development of tetanus was prevented by the administration of the serum by the mouth. These were all cases in which it was intended to immunize the members of the family surounding the diphtheritic individual." The context does not make inexcusable the impression that we received from the above statement as it apparently argues for the possibility of toxins and antitoxins being absorbed by the mucous membranes of the digestive tract in children. The concluding sentence of the article, "Although in our case this form of antitoxin administration was a very fortunate quid pro quo, it is not to be recommended as a generally indicated method," may

perhaps also be taken to convey the meaning as understood by us. It appears from his explanation that the subjects escaped tetanus in 15 cases because they took the serum only by the mouth and did not absorb it. They were cases of non-exposure; therefore, it seems hardly correct to say that the development of tetanus was prevented. If the article had read "avoided" or "escaped" instead of "prevented" the misunderstanding would not have occurred. We admitted a certain lack of understanding of the passage in the editorial and now accept the correction. Our editorial was simply intended to be a little less obscurely sarcastic as to this particular method of immunization than it appears was his article on this special point. EDITOR.]

Book Notices.

MEMOIRS AND LETTERS OF SIR JAMES PAGET. Edited by Stephen Paget, One of His Sons. With Portraits and Other Illustrations. Cloth. Pp. 438. Price, $5.00. New York and Bombay: Longmans, Green & Co. 1901.

The biography of a great man, one who has obtained his greatness by his own efforts, is always a stimulus to those who read it. This is true of the life of Paget. It gives us the aims, ambitions, personality and method of work of one who had added luster to our profession by hard work under extreme difficulties. Although he died only two years ago, Paget seems to belong to a past era in medicine, and in one sense this is so. His great work on Surgical Pathology—the book that bridged the medicine of the past with that of to-day—published in 1853, nearly fifty years ago. Born at a seaport town, Yarmouth, his boyish fancy was for the navy, and it was only by the merest accident that this fancy was not gratified. His next great attraction was botany, and in this he gained quite a reputation in his youth, collaborating with his brother in writing a description of the flora of his neighborhood. But this he realized was not a very satisfactory life-work, and he succeeded in getting apprenticed to a local surgeon, and in 1834 entered Bartholomew's, London, receiving his M.R.S.C. in 1836. Then came the "waiting time" as he expresses it, but in reality it was a working time. He was now poor, and dependent on himself, for his father had lost everything. Left to his own resources, his indomitable energy showed itself. His ambition decided him to stay in London, and as practice was naturally slow in coming he went to work writing translations and instructing any stray pupil that he could get. This was in addition to the scientific work he was carrying on. He tells us that his total receipts from practice during his first seven years was less than $700. "During the first seven years after obtaining my diploma my largest income from practice was £23 13s." But then came a change, for he tells us that at one time his annual income exceeded £10,000. This success came though after many years of hard work, work that allowed him only four or five hours sleep, and often not that much.

The book consists of an autobiography—interesting, but much too brief—and letters, with comments by his son. These give us an idea of the man as a private individual, as a great surgeon and teacher, and as an honorable member of the profession he loved. They also give an insight into the reason for his greatness—his indomitable energy and tireless work. The book tells us of the beginnings and the early developments of modern pathology, and presents the methods of work and the personality of the man who did so much for it. While the book is as interesting as a novel, above all it is instructive.

TYPHOID AND TYPHUS FEVERS. American Edition of Nothnagel's Encyclopedia. By Dr. H. Curschmann, of Leipzig. Edited, with additions, by William Osler, M.D., Professor of the Principles and Practice of Medicine, Johns Hopkins University. Handsome octavo of 646 pages, illustrated, including a number of valuable temperance charts and two full-page colored plates. Cloth, $5.00 net. Philadelphia and London: W. B. Saunders & Co. 1901.

One of the best systems of medicine in any language is Nothnagel's Encyclopedia, heretofore a closed book to those who do not read German. Its reproduction in English will be heartily welcomed by all who know the work by reputation, and the thanks of the English-speaking profession are due the publishers for their enterprise in placing this magnificent work before them. If the first volume on typhoid and typhus fevers, now before us, is a fair sample of those which are to follow, then, indeed, shall we have a series of monographs surpassing even the original. The first volume contains 646 pages, 472 of which are devoted to the discussion of typhoid fever. The general character of this work is so well known that it would be superfluous for us to take space to enlarge upon its general character. We can say, however, that under the editorial supervision of Dr. Osler, the original German work, excellent though it is, has been much improved, greatly enlarged and enhanced in value, especially to American readers. The work is much more than simply a translation of the original, for it contains additional matter in nearly every chapter. The recent work of Americans has especially been recognized and incorporated in this monograph. Taking it all in all, the monograph on typhoid fever is the best exponent of the knowledge that we have in regard to this disease that is to be had in any language. The publishers have done their part well, the book making an excellent appearance. It is especially well and artistically bound, printed on paper above the average, so that all in all, the book is worthy of the highest commendation.

Married.

S. H. CORDONIER, M.D., Avilla, Mo., to Miss Hattie Wise of Tamalco, Ill., December 20.

ROBERT D. SISTRUNK, M.D., to Miss Corinne Coleman, both of Dade City, Fla., December 24.

PAUL C. RIETZ, M.D., Evansville, Ind., to Miss Ida Lauppe of Seward, Neb., December 25.

ELMER E. HAYNES, M.D., Belpre, Kan., to Miss Luella Adams of Abilene, Kan., December 25.

J. LEONARD JENNINGS, M.D., Danville, Va., to Miss Mary M. Ogle, at Baltimore, December 25.

HENRY A. BLAIR, M.D., San Antonio, Texas, to Miss Lillian Kratz, Edmundson, St. Louis, Mo.

THOMAS MOATE, M.D., to Miss Anna Rich, both of Gridley, Ill., at Eureka, Ill., December 19.

PAUL VAN RIPER, M.D., Beacon, Mich., to Miss Edyth A. Gage of Niles, Mich., December 25.

ELMER U. WOOD, M.D., Columbus, Ind., to Miss Minerva Bates of London, Ohio, December 26.

LOUIS J. C. BAILEY, M.D., Stonega, Va., to Jean Cruickshank. M. D., Toronto, Ontario, December 24.

WILLIAM C. PRESSLY, M.D., Troy, Tenn., to Miss Cammie Brice of Union City, Tenn., December 19.

EUGENE C. LINDSAY, M.D., Tuscumbia, Ala., to Miss Emily White of Belle Mina, Ala., December 17.

PETER JOHN, M.D., Laurinburg, N. C., to Miss Nannie Watkins of Charlotte County, Va., December 24.

ELEANOR CAPITOLA READ, M.D., Peru, Neb., to Julian D. Graves of Hillsdale, Iowa, December 30.

HORACE L. JONES, M.D., Waggoner, I. T., to Miss Nannie May Hunt of Adair, Tenn., December 27.

JAMES BRAINARD CROFF, M.D., to Carro Julia Cummings, M.D., both of Buffalo, N. Y., December 24.

AUGUSTUS SARGENT BOLSTEF, M.D., to Miss Georgia Louise Houghton, both of Worcester, Mass., January 1.

JOHN DE MOTTE MILLER, M.D., Leavenworth, Kan., to Miss Florence Reasoner, at Ypsilanti, Mich., December 20.

S. P. HART, M.D., Waverly, Ill., to Miss Nola May Fletcher of Auburn, Ill., at Springfield, Ill., December 18.

WARREN H. HUNTER, M.D., to Miss Louise V. Greenwood, both of Chicago, at St. Joseph, Mich., December 31.

THOMAS A. JOYCE, M.D., to Miss Jennie B. McCaffrey of East End, Pittsburg, Pa., at Sheraden, December 28.

WILLIAM LUTHER SHOLLENBARGER, M.D., Cincinnati, Ohio, to Miss Carolyn Faber of Westwood, Ohio, December 18.

RALPH C. TILLEY, M.D., to Miss Annie Dorrel, both of Petersburg, Ky., at East Enterprise, Ind., November 28.

C. W. GREEVER, M.D., North Tazewell, Va., to Miss Nannie, daughter of Dr. Thomas G. Witten, Tazewell, December 25.

CHARLES WILBUR HEDGES, M.D., Newkirk, Okla., to Miss Pearle Atchison Carmichael of Nashville, Tenn., December 25.

MARTIN PEMBROKE CONGDON, M.D., Binghamton, N. Y., to Miss Hortense Josephine Coyne, of Scranton, Pa., December 26.

ROBERT PEYTON LACKEY, M.D., Nagadoches, Texas, to Miss Mittaise Pansy Holt of West Nashville, Tenn., December 25.

OTTO F. WELLENREITER, M.D., Quincy, Ill., to Miss Mary Etta Mohler of Washington, D. C., at Quincy, Ill., December 25.

CHARLES M. FREEMAN, M.D., Metucken, N. J., to Miss Mary E. Wilkins of Randolph, Mass., at Metucken, N. J., January 1.

DAVID HARRY RUTHERFORD PATTON, M.D., Chicago, to Miss Mary Ellen Fallon of Oshkosh, Wis., at Chicago, December 23.

ROBERT A. RANGE, M.D., Elizabethton, Tenn., to Miss Mary E. Emert of Keensburg, Tenn., at Harmony Church, December 2.

FREDERICK NELSON TANNER, M.D., Vienna, Dorchester County, Md., to Miss May S. Purcell, at Baltimore, December 17.

WILLIAM BURNHAM FISK, M.D., Chicago, to Miss Georgia Antoinette Denger of Elm Grove, Fond du Lac, Wis., December 31.

GEORGE WILLIAM SHERA, M.D., to Miss May Finley Bishop, both of Jersey City, N. J., at Trinity Church, New York, December 18.

HARRY EDWIN WILLIAMS, M.D., Milton, Mass., to Miss Emma Josephine Tyler of Mount Vernon, Mass., at Augusta, Maine, December 25.

BERNARD HEATH EARLY, M.D., Blue Ridge Springs, Va., to Miss Bernardine Peyton Llewellyn, a trained nurse, at Baltimore, January 2.

Deaths and Obituaries.

Duncan McLeod, M.D. Detroit Medical College, 1873, one of the best-known physicians of Detroit, ex-health officer of the city, a member of the faculty of the Detroit Medical College, and for twenty-two years a practitioner of the city, died December 29, at his home, from pleuro-pneumonia, after an illness of two weeks, aged 53. The Wayne County Medical Society called a special meeting, December 31, at which resolutions were adopted, stating that "as a physician and as a citizen he held positions of honor and trust, which he discharged with fidelity, and in the closer relations in which it was the privilege of this Society to know him, the innate qualities of a generous heart, an honorable character and an amiable nature were fully revealed."

Oscar Dunreath Abbott, M.D. Berkshire Medical College, Pittsfield, Mass., 1850, a prominent figure in medical circles in New England for half a century, died at his home in Manchester, N. H., after an illness of two months, following an attack of la grippe, January 1, 1902, aged 77. He has served as city and county physician, as a member of the Board of Health and was a member of the State Medical Associations of Massachusetts and New Hampshire, and the Manchester Medical Association, and was consulting physician to the Elliot Hospital.

Lewis Evans Carson, M.D. Medical College of Evansville, Ind., 1876, chaplain of the 98th Indiana Infantry during the Civil war, and since 1876 in active practice in Prairieton, Ind., died at his home in that place, December 29, aged 77. He is said to have been the "friend, physician and pastor" of almost everyone in the township. He was a member of the Vigo County Medical Society and of the Æsculapian Society.

Leroy A. Merrill, M.D. University of Vermont, Burlington, 1882, for many years a practicing physician of Lonsdale, R. I., died at his home in that village, December 23, from typhoid fever, after an illness of three weeks, aged 46. He was a member of the Pawtucket Medical Society and the Rhode Island Medical Society, and was coroner and health officer of Lonsdale for several years.

Henry Fitzbutler, M.D. University of Michigan, Ann Arbor, 1872, the first colored regular practitioner to settle in Kentucky, dean and professor of materia medica and surgery in the Louisville National Medical College, and surgeon to the Auxiliary Hospital, died at his home in Louisville, December 28, from chronic bronchitis of six years' duration, aged 64.

Frederick M. Barrows, M.D. Geneva (N. Y.) Medical College, 1846, a resident of Clinton, N. Y., for nearly 70 years, and a practitioner for 55 years, died at his home in that place, December 27, aged 79. Until a year ago he was in active practice, but at that time he suffered a stroke of paralysis, and a few months later became totally blind.

George D. McIlwaine, M.D. Western Pennsylvania Medical College, Pittsburg, 1895, a practitioner of Washington, Pa., who served in the Spanish-American war with the 10th Pennsylvania Infantry, U. S. V., in the Philippines, died at the residence of his father in Pittsburg, December 25, from Bright's disease, after a short illness, aged 35.

Amos C. Lewis, M.D. Cincinnati College of Medicine and Surgery, 1871, a well-known dermatologist of New York City, formerly medical superintendent of the Skin and Cancer Hospital, and at the time of his death visiting physician to the Fordham Hospital, died at his home in New York, December 28, after an illness of five weeks, aged 59.

James Snyder Mackie, M.D. College of Physicians and Surgeons, Baltimore, M.D., who practiced for several years in Baltimore, but entered the diplomatic service of the United States in 1851, remaining therein until 1864, died at his home in Newark, N. J., from apoplexy, after an illness of two days, December 30, aged 77.

John Geyer, M.D. University of Wooster, Cleveland, Ohio, 1876, a prominent German practitioner of Dayton, Ohio, died at his home in that city, December 29, after a long and painful illness, aged 56. At a meeting of the Montgomery County Medical Society, December 23, a memorial to Dr. Geyer was drafted and adopted.

George C. Devine, M.D. Jefferson Medical College, Philadelphia, 1882, who served as apothecary in the United States Navy until 1886, and then practiced in Philadelphia, where for the last 12 years he was police surgeon, died at his home in that city, December 26, after an illness of one week, from pneumonia, aged 43.

James M. Wallis, M.D. University of Pennsylvania, Philadelphia, 1847, a well-known physician of Philadelphia, died at his home in that city, December 28, aged 77. He served as surgeon throughout the Civil war, and at its close returned to Philadelphia, where he practiced until twenty years ago, when he retired.

Isaac T. Monroe, M.D. Albany (N. Y.) Medical College, 1866, a prominent physician of Granville, N.Y., and a member of the Washington County Medical Society, died at his home in Granville, December 29, after a prolonged illness, from bronchial pneumonia, aged 61.

M. W. Hamilton, M.D. Tulane University, New Orleans, a member of the Little Rock, Ark., Medical Society, died recently at that place. The Society passed resolutions expressive of its loss and of its sympathy for the bereaved relatives, at a meeting held January 2.

T. H. Wright, M.D. Louisville (Ky.) Medical College, 1873, for many years a practitioner of Pickens, Miss., died at the residence of his daughter in Washington, D. C., December 24, from Bright's disease, after a protracted illness.

Frank A. Farrell, M.D. Jefferson Medical College, Philadelphia, 1893, a practitioner of Wilkesbarre, Pa., died, December 29, at Deming, N. M., where he had gone for his health a year ago, from pulmonary hemorrhage, aged 35.

John R. Wood, M.D. Medical College of Virginia, Richmond, 1864, one of the most prominent physicians of Albemarle County, Va., died recently at his home in White Hall, Moorman's River, from Bright's disease, aged 63.

Charles J. Barnum, M.D. Tuft's Medical School, Boston, 1901, an interne at the Boston City Hospital, died at that institution, January 2, after an illness of three weeks, from typhoid fever, aged 21. He was a native of Chicago.

James L. Titterington, M.D. Missouri Medical College, St. Louis, 1886, for several terms a member of the legislature and a pioneer citizen of La Clede County, died at his home in Richland, Mo., December 25.

Frank M. Cronin, M.D. University of Pennsylvania, Philadelphia, an old and esteemed practitioner of Lancaster, Wis., died suddenly in his office in that city, from heart disease, December 25, aged 55.

Thomas A. Joyce, M.D. West Penn Medical College, Pittsburg, whose marriage on December 28 is noted in this issue, died at his home in Sheraden, Pittsburg, December 31, aged 30.

Samuel C. Webb, M.D. Albany (N. Y.) Medical College, 1854, who had practiced medicine for nearly 25 years in Homer, N. Y., died at his home in that place, December 29, aged 83.

Milton P. Mason, M.D. Western Reserve University, Cleveland, Ohio, 1854, one of the oldest residents of Mansfield, Ohio, died suddenly at his home in that city, December 26, aged 72.

Samuel H. Hudnall, M.D. New York University, 1852, who had practiced medicine in Campbell County, Va., for more than 40 years, died recently at his home in Brookneal, aged 75.

Emily A. Benn, M.D. University of Michigan, Ann Arbor, 1892, an able practitioner of Ypsilanti, Mich., died at her home in that city, January 2, after a long illness, aged 41.

Abby J. Wolverton, M.D. University of Nashville, Tenn., 1878, a prominent practitioner and capitalist of Indian Territory, died at his home in Ardmore, December 28.

P. J. McCaffrey, M.D. Vanderbilt University, Nashville, Tenn., 1899, who practiced in Ashland, Pa., and thence removed to Cleveland, Ohio, died recently, aged 23.

Frank E. Webb, M.D. University of Nashville, Tenn., 1882, died at his home in Nez Perce, Idaho, December 21.

Association News.

New Members.

The following is a list of new members for the month of December, 1901:

ALABAMA.
Dennis, G. A., Montgomery.

ARKANSAS.
Cuffman, J. H., Gurdon.
Douglass, T., Ozark.
McConnell, J. W., Huntington.
Stanley, W. T., Selma.
Wallis, Jas. C., Arkadelphia.

CALIFORNIA.
Barry, W. T., Salinas.
Canao-Marquis, F. P., San Francisco.
Hitchcock, Los Angeles.
Hutchinson, G. L., Los Angeles.
Ross, Thomas, Sacramento.

COLORADO.
Trout, A. L., Berwind.
Zodorbaum, A., Denver.

CONNECTICUT.
Jennings, G. H., Jewett City.
Lawrence, G. W., East Berlin.
Monagan, C. A., Waterbury.
Nettleton, F. I., Shelton.

DISTRICT OF COLUMBIA.
Johnston, W. W., Washington.
White, C. S., Washington.

GEORGIA.
Crawford, O. G., Sasser.
Toepel, T., Atlanta.
Wright, J. E., Macon.

IDAHO.
Kinnaird, Wm., Idaho Falls.
Conant, Jr., J. L., Genesee.
Morris, J. B., Lewiston.
Schaff, C. W., Lewiston.

ILLINOIS.
Allen, F. M., Chicago.
Baumgartner, M. M., Freeport.
Brooks, E. W., Altamont.
Caspers, Paul, Chicago.
Earle, F. B., Chicago.
Easley, W. T., Greenville.
Glasgow, E. A., Mulberry Grove.
Greenfield, C. E., Chicago.
Hall, Andy, Mt. Vernon.
Milnamow, J. T., Chicago.
Miner, E., Champaign.
Nash, F. W., Big Rock.
Pierce, F. E., Chicago.
Smith, I. C., Stockton.
White, Earl C., West Brooklyn.

INDIANA.
Alexander, W. P., Gas City.
Bowell, Bo., La Porte.
Brittain, S. H., Loogootee.
Cochran, T. C., Sharpsville.
Evans, F. A., Tell City.
Foxworthy, Frank W., Indianapolis.
Houghland, Chas. S., Milroy.
Kendle, G. C., Princeton.
McClurkin, J. C., Evansville.
Sutherland, P. N., Angola.

IOWA.
Bay, H. H., Marshalltown.
Cornell, C. W., Knoxville.
Farnsworth, D. W., Galva.
Hamilton, A. S., Independence.
Lukens, J., Oskaloosa.
McConnaughey, W. D., Prairie City.
McKaig, R. F., Wever.
Payne, Harry C., Leighton.
Payne, C. W., Boone.
Ransom, W. L., Granger.
Singleton, E. M., Marshalltown.
Stratton, M. R., Cleveland.
Tribbet, J. C., Montezuma.

KANSAS.
Atkin, E. N., Olmitz.
Cheney, E. R., Gypsum.
Sandidge, J. H., Mulberry.
Smith, C. A., Yale.

KENTUCKY.
Cox, B. D., Jackson.
Prather, H. E., Hickman.
Taulbee, J. B., Maysville, Macon County.

LOUISIANA.
Barrier, J. M., Delhi.
Cline, Isaac M., New Orleans.
Minus, David D., Crowley.
Sabatin, G. J., New Iberia.

MAINE.
Barker, F. N., Norway.
Binford, H. J., Mexico.
Chamberlain, A. H., Foxcroft.
Campbell, G. R., Augusta.
Chapman, H. M., Ashland.
Gribben, H. E., Augusta.
Higgins, Lelia, Livermore Falls.
Hill, H. B., Augusta.
Swett, A. W., Bangor.
Wadsworth, J. E., Skawhegan.

MARYLAND.
Buffington, J. A., New Windsor.
Halsted, W. S., Baltimore.
Hinebaugh, M. C., Oakland.
Kirby, F. J., Baltimore.
Pancoast, O. B., Baltimore.
Sawdrock, W. Christian, Baltimore.
Smith, F. R., Baltimore.

MASSACHUSETTS.
French, C. L., Clinton.
Hopkins, F. E., Springfield.
McGannon, T. G., Lowell.
Meigs, R. J., Lowell.
Morse, C. E., Wareham.
Robertson, W. B., Belmont.

MICHIGAN.
Conley, W. C., Ishpeming.
Cowie, D. M., Ann Arbor.

MINNESOTA.
Fischer, H. P., Shakopee.
Lyng, J. A., Alexandria.
Mowers, S. W., Brainerd.
Reiter, H. W., Shakopee.

MISSISSIPPI.
Coker, C. M., Sharon, Madison County.
Folkes, H. McM., Biloxi.
Jones, D. W., Hermanville.
Mooney, J. B., Scooba.
Payne, A. G., Greenville.
Allen, W. W., Paris.

MISSOURI.
Bragg, G. G., Huntsville.
Baker, R. W., St. Louis.
Cline, Wilburn, Appleton City.
Epstein, M. J., St. Louis.
Miller, G. H., St. Peters.

MONTANA.
Cahoon, G. W., Butte.

NEBRASKA.
Carlyle, W. L., Hastings.
Taggert, E. J., Gretna.

NEW HAMPSHIRE.
Dunbar, E. B., Manchester.
Garland, W. R., Plymouth.
Gleason, J. H., Manchester.
Palmer, Haven, Plymouth.
Shedd, G. H., North Conway.
Toye, J. E., Acworth.

NEW JERSEY.
Cunningham, Geo., Vineland.
Fee, E. K., Lawrenceville.
Philhower, G. B., Nutley.
Ridgeway, G. M., Trenton.
Teeter, C. E., Newark.
Webner, Fred, Newark.

NEW MEXICO.
Ramus, Carl, Fort Stanton.

NEW YORK.
Bradford, G. D., Homer.
Brown, L., Saranac Lake.
Coughlin, R. E., Brooklyn.
Elsberg, C. A., New York City.
Leitner, Geo. A., Pierpont, Rockland County.
Roth, Henry, New York City.
Satterwhite, P. P., New York City.
Smith, J. R., Conewango Valley.
Sweetman, Jr., J. T., Ballston Spa.
Taylor, H. L., New York City.

NORTH CAROLINA.
Stevens, M. L., Asheville.

OKLAHOMA.
Bartle, Ira B., Augusta.
Cravens, T. A., Oklahoma.
Gamble, R. A., Alva.
Hume, Chas. R., Anadarko.

OREGON.
Carll, W. E., Oregon City.
Flanagan, W. H., Grant's Pass.
Harris, T. W., Eugene.
May, W. J., Baker City.
Morse, W. B., Salem.
Parker, Wm. L., Baker City.
Prentice, F. W., Eugene.
Straw, Edwin E., Marshfield.
Williamson, W. T., Salem.

PENNSYLVANIA.
Appel, T. B., Lancaster.
Brown, W. H., Youngwood.
Cocklin, C. C., Harrisburg.
Daniell, A. W., Philadelphia.
Hartman, F. G., Lancaster.
Hobensack, J. R., Philadelphia.
Houghton, C. W., Philadelphia.
Kremer, W. H., Philadelphia.
Jopson, J. H., Philadelphia.
McCay, Robt. B., Trevorton.
Siter, E. H., Philadelphia.

RHODE ISLAND.
Hayes, A. E., Providence.
Monroe, W. C., Woonsocket.

SOUTH CAROLINA.
Knowlton, A. B., Columbia.

SOUTH DAKOTA.
Brown, E. L., Parkston.
Jackson, E. B., Mound City.
Kriesel, W. A., Milbank.

TENNESSEE.
Malone, G. B., Memphis.
Wise, E. B., Chattanooga.

TEXAS.
Dabney, B., Bonham.
Ferguson, E. S., Cameron.
Hamilton, H. J., Laredo.
Lyon, W. H., Buckholts.
Miller, J. W., Hillsboro.
Scarborough, A. O., Snyder.
Shuford, F. B., Whitewright.
Stephenson, W. O., Nevada.
Van Nuys, J. C., Franklin.

VIRGINIA.
Berlin, Lewis, Norfolk.
Martin, R. S., Stuart.
Winfree, J. M., Richmond.

WASHINGTON.
Armstrong, G. S., Spokane.
Randall, G. H., Seattle.

WEST VIRGINIA.
Linsz, H. P., Wheeling.

WISCONSIN.
Blank, H., Jackson.
Christiansem, C., La Crosse.
Glim, N. N., Ashland.
Gutsch, O. J., Sheboygan.
Leonard, C. W., St. Cloud.
McGovern, J. J., Milwaukee.
Schreiner, J. K., Westby.

Societies.

German Medical Society (San Francisco).—An association known as *Verein Deutscher Aerzte*, has been incorporated in San Francisco by Drs. E. Steltzner, Douglas W. Montgomery, Adolph G. Rosenthal, Emil O. Jellinek and Robert D. Cohn.

Clinton County (Pa.) Medical Society.—At the meeting of this Society, December 20, Dr. Saylor J. McGhee, Mill Hall, was elected president; Dr. George Green, vice-president; Dr. Robert B. Watson, Lock Haven, secretary, and Dr. Luther M. Holloway, Salona, treasurer.

South Carolina Medical Society.—The annual meeting and banquet of this Society were held at Charleston, December 9. Dr. John Forrest was elected president; Dr. Walter P. Porcher, vice-president; Dr. Cornell, secretary, and Dr. Charles M. Rees, treasurer, all of Charleston.

Los Angeles County (Cal.) Medical Association.—At the annual meeting of this Association, held December 20, Dr. Jay H. Utley was elected president; Dr. Rose T. Bullard, vice-president; Dr. John C. Ferbert, treasurer, and Dr. Charles G. Stivers, secretary, all of Los Angeles.

Medical Association of Berrien County (Mich.).—At the annual meeting recently held, Dr. Robert Henderson, Buchannan, was elected president; Dr. Edward J. Witt, St. Joseph, vice-president; Dr. Frank A. Votey, Benton Harbor, secretary, and Dr. Frank M. Kerry, Benton Harbor, treasurer.

Lawrence County (Pa.) Medical Association.—The annual meeting and banquet of this Association were held at New Castle, December 13. The following officers were elected. Dr. John Foster, president; Dr. H. Elmore Zerner, vice-president, and Dr. C. F. McDowell, secretary, all of New Castle.

Kentucky School and Hospital Medical Society.—The faculty and instructors of the Kentucky School of Medicine, Louisville, have organized a medical society, which, at its first meeting, December 6, elected Dr. William A. Jenkins, president; Dr. Charles W. Hibbitt, vice-president, and Dr. John R. Wathen, secretary.

Richmond (Va.) Academy of Medicine.—At the meeting of the Academy, December 10, the following officers were elected: Dr. Lewis C. Bosher, president; Drs. William F. Mercer, Ramon D. Garcin and Moses D. Hoge, vice-presidents; Dr. Mark W. Peyser, secretary; Dr. Edward J. Moseley, treasurer, and Dr. Marvin E. Nuckols, librarian.

Montgomery County (Ala.) Medical Association.—At the annual meeting of this Association, held in Montgomery, December 14, Dr. Glenn Andrews was elected president; Dr. John M. Sadler, vice-president; Dr. Charles T. Pollard, secretary; Dr. Shirley Bragg, treasurer, and Dr. Robert N. Pitts, county health officer, all of Montgomery.

Chesterfield County (Va.) Medical Association.—The physicians of Manchester and of Chesterfield county met at Swansboro, December 11, and organized this Association with the following temporary officers: Dr. John B. Fisher, Midlothian, president, and Dr. J. G. Loving, Swansboro, secretary. The first regular meeting and election of officers will be held January 13.

North Texas Medical Association.—The semi-annual meeting of this Association was held in Greenville, December 10, 11 and 12. Dr. Jesse B. Shelmire, Dallas, was elected president; Dr. Jarrett T. Benbrook Rockwall, vice-president; Dr. Hugh L. Moore, Van Alstyne, secretary, and Dr. Carey A. Gray, Bonham, treasurer. Fort Worth was selected as the next place of meeting.

South Texas Medical Association.—The eleventh semi-annual meeting of this Association was held in Houston, December 13 and 14. Dr. Robert T. Morris, Houston, was elected president; Dr. William Keiller, Galveston, first vice-president; Dr. H. A. Barr, Beaumont, second vice-president, and Dr. D. Stuart Wier, Houston, secretary and treasurer. The next meeting will be held at Beaumont in May.

Lamoille County (Vt.) Physicians' Association.—A meeting of the physicians of Lamoille County was held at Morrisville, December 16, and an association organized, the object of which is to establish a uniform fee-bill. The members will have a cash customer list for those who habitually neglect to pay and any physician not receiving cash for each visit will be liable to expulsion from the association.

Northwestern Ohio Medical Association.—This Association held its fifty-seventh meeting at Lima, December 12 and 13. The following officers were elected: Dr. Joseph P. Baker, Findlay, president; Drs. Charles W. Moots, Delphos, and Martin S. Cramer, Ohio City, vice-presidents; Dr. Albert S. Rudy, Lima, secretary, and Dr. Theodore M. Gehrett, Deshler, assistant secretary and treasurer. The next meeting is to be held in Findlay.

Iowa Central Medical Society.—The semi-annual meeting of this Society was held in Marshalltown, December 10. The following officers were elected: Dr. Dorr Graves, Gilman, president; Drs. Norman E. Mighell and Benjamin F. Kierulff, Marshalltown, and Dr. Hiram H. Bay, Marshalltown, secretary and treasurer. A banquet followed and the Society adjourned to meet at Oak Bluff, the country home of Dr. Mighell near Marshalltown, in June.

Philadelphia College of Physicians—Section on Gynecology.—At the annual meeting of this section on December 19, Dr. George Erety Shoemaker was elected chairman for the year and Dr. John H. Girvin was re-elected clerk. Dr. Edward P. Davis read a paper on "Retroversion and Retroflexion of the Uterus"; Dr. John M. Baldy, a paper on "Adeno-Myoma of the Uterus," and Dr. Charles P. Noble, a paper on "The Technique of Amputation of the Cervix."

Salt Lake (Utah) Medical Society.—At the meeting of this Society, December 9, a committee consisting of Drs. Andrew J. Hosmer, Emerson F. Root, and Eugene W. Whitney was appointed to revise the constitution and by-laws to make them conform to the recommendations of the American Medical Association. The following officers were elected: Dr. J. C. Elliott King, president; Dr. Eugene W. Whitney, vice-president; Dr. Archibald A. Kerr, secretary, and Dr. Augustus C. Behle, treasurer.

Hospital Medical Society (Rochester, N. Y.).—At the annual meeting of this Society, December 12, the following officers were elected: Dr. George W. Goler, president; Dr. Joseph R. Culkin, vice-president, and Dr. Charles O. Boswell, secretary-treasurer. The Society passed the following resolutions pertaining to vaccination:

WHEREAS, There is a disinclination on the part of some of the people of the city of Rochester to submit to vaccination, even in the face of a possible epidemic of smallpox, and

WHEREAS, No scientific fact is better established than the prevention of smallpox by means of vaccination repeated at proper intervals;

Resolved, That the members of the Hospital Medical Society of Rochester endorse the action of the health department of this city in recommending the vaccination of all persons not properly protected against this disease.

Suburban Medical Society.—An association has been formed whose object is to bring the physicians in the towns of Oak Park, Maywood, Melrose Park, Bellwood, Harlem, Berwyn, Riverside, La Grange, Elmhurst, Lombard, Franklin Park, Mount Clare, and River Forest, western suburbs of Chicago, into a closer social relation, and for the discussion of scientific questions. They will also help in establishing the new hospital, which will be opened in a short time in Maywood by the Servite Sisters. The building will be entirely remodeled and equipped with all the best medical appliances. A meeting and banquet were held at Maywood, December 27, at which officers were elected as follows: Dr. William F. Scott, Melrose Park, president; Dr. Clarence E. Hemmingway, Oak Park, vice-president; and Dr. William R. Livingston, Maywood, secretary and treasurer.

THE WESTERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Eleventh Annual Meeting, held in Chicago, Dec. 18 and 19, 1901.

(Continued from p. 53.)

President Dr. A. F. Jonas, Omaha, Neb., in the Chair.

Presidential Address.—Use of the Gall-Bladder as a Suspensory Ligament for Prolapsed Liver.

DR. A. F. JONAS, Omaha, delivered the Presidential Address. He said that the liver was sometimes displaced downwards to a considerable degree; that there was usually modified function and a well-defined clinical picture belonging to this change of position. Mrs. S., aged 41, had for three years suffered from paroxysms of severe pain located in the right hepatic region. These pains, always sudden in onset, sometimes subsided in the course of one or two hours, but occasionally continued until relieved by opiates. Whether they were relieved spontaneously, or by anodynes, they were always succeeded by nausea and an aversion for food lasting for two days to a week. During the intervals she had a dragging pain in the right hypochondriac region. A year previously she had had a moderate degree of jaundice. Otherwise her history was negative. On examination her abdomen was distended and tympanitic; the abdominal walls were pendulous, soft and flabby, and covered with numerous striæ, the result of child-bearing. On palpation pain on pressure was elicited over the region of the gall-bladder, but no enlargement of that viscus could be made out. A movable lump was found between the right costal arch and the iliac crest, which proved to be the right kidney. The diagnosis was biliary calculi in the gall-bladder, and movable right kidney. Cholecystotomy and nephrorrhaphy were recommended and agreed to by the patient. After the usual preliminary preparations, a vertical incision was made, beginning at a point over the median end of the ninth rib, and extending down four inches. On entering the abdominal cavity, the lower margin of the liver was three fingers' breadth below the costal arch. The liver could very easily be elevated to its normal position, but it descended very slowly when pressure upwards was released. In appearance it was normal. The gall-bladder was easily found, and several calculi could be felt through its walls. The displaced and movable kidney could be made out. The liver could be held in place by little effort, particularly when an ordinary amount of traction was made on the gall-bladder; so the question presented itself, Why not use the gall-bladder as a suspensory ligament? Accordingly, it was sutured in the uppermost part of the wound, snugly against the costal arch, the sutures passing through the gall-bladder wall, the parietal peritoneum and muscles. Before closing the peritoneal cavity, an exploration was made for the movable kidney, but it had receded to its normal position, and could not be displaced. The peritoneum was then closed, the

remaining wound sutured in the usual way, save to allow for opening the bladder. This was done and several calculi removed. A long drainage tube was introduced, and the wound was then dressed by an antiseptic, hygroscopic pad. The drainage tube was removed in one week. The wound closed at the end of four weeks. The patient was directed to wear a snugly-fitting abdominal band. Subsequently several examinations were made. On percussion, the liver had remained in its normal position and the dragging pain had disappeared. No displacement of the kidney could be made out, although she assumed several positions, straining in various ways. It was evident that the descended kidney was dependent on the descent of the liver. In this case, unfortunately, it was not ascertained whether there was associated a downward displacement of the stomach and colon. The author concluded: 1. The cause of hepatoptosis consisted in a modification of one or more of its normal supports, or an increase in the size and weight of the liver. 2. It was impossible for the liver to descend without producing a descent of the hollow abdominal viscera. 3. The utilization of the gall-bladder as a suspensory ligament to maintain and hold in its normal position a prolapsed liver, together with certain other abdominal organs, seemed practical.

Heart Suture.

DR. B. MERRILL RICKETTS, Cincinnati, referred to malposition, displacement and malformation of the heart, and then detailed a series of experiments which he had conducted on animals with reference to suturing the heart. He stated that there were 27 cases of suture of the heart for wounds in human beings reported up to the present time, with recovery in seven instances. In this work it was necessary to use a suture that was longer-lived than ordinary catgut, and he had employed kangaroo tendon in ligating the coronary arteries and fine-silk sutures in the walls of the heart. The sutures should be applied in systole of the heart, and not during its expansion. Certain hearts were softer than others; they broke down under the use of forceps, and forceps should not be used in this work. The indications for suturing the heart had to be worked out; but it was interesting to see how readily the chest could be opened with the right kind of forceps. He had used a kind of pruning forceps in his experimental work. He had opened the chest, reached the heart, and sutured it in forty seconds (?), and he did not think it would require much more time to do this in the human being. The aspirator should not be used for anything about the heart, because injury to the coronary arteries would often result in hemorrhage and death. The time had arrived when the surgeon should no longer hesitate to open the chest for injuries of the lung and of the heart in cases of emergency.

DR. W. W. GRANT, Denver, read a paper on "Fracture of the Metacarpal Bones, and Oblique Fracture, Simple or Compound, of the Forearm," which will appear in full in THE JOURNAL.

DR. JOHN P. LORD, Omaha, narrated in an interesting manner some of the observations that he had made during a trip in Europe.

Symposium on Prostatectomies.

DR. ALEXANDER HUGH FERGUSON, Chicago, read a paper on "Total Extirpation of the Prostate Gland Through a Median Incision in the Perineum." In several cases operated on by the author his results were better than he had ever secured by the suprapubic route. He stated, 1, that it was the most direct route to the organ, and that the prostate could be removed without injuring any important structure. 2. The operation was easily performed. In all those cases in which the gland had been repeatedly inflamed, it made it more difficult to operate, but not as difficult even then to remove the prostate from below as to do the suprapubic operation. 3. The removal of the gland piece by piece enabled the surgeon to work through a small opening and prevented the bruising of the surrounding parts by the finger, which was accompanied with the removal of the gland *en masse* through the perineum. 4. Hemorrhage was avoided, so long as one was careful to work within the capsule. The hemorrhage in suprapubic prostatectomy, or in the combined method, was often very alarming. On one occasion the writer had to leave pressure forceps on blood vessels and pack the bladder tightly with gauze 24 hours. The patient narrowly escaped death from both hemorrhage and sepsis. Perineal drainage after suprapubic prostatectomy was not as complete as when the prostate was attacked from below. It was found by the writer that the danger from septicemia was not at all prominent after perineal prostatectomy, and so far had given no anxiety whatever. There was less danger of uremia. The operation took the shorter time; the anesthesia having, therefore, less effect upon the kidneys, and a minimum opportunity for sepsis made it easier for the kidneys to perform their functions. The suprapubic operation was accompanied with far more shock than the author had found following perineal prostatectomy.

DR. LEWIS SCHOOLER, Des Moines, Iowa, read a paper on the "Symptoms, Signs, Diagnosis, Prognosis and Palliative Treatment of Hypertropny of the Prostate." The palliative treatment was divided into massage, aspiration, catheterization, dilatation, and cystotomy. In considering all of the above methods, none were intended to be radical; none were calculated to remove the cause. All were intended to partially, at least, restore functional activity and to produce results sufficiently satisfactory to prevent the need of more radical procedures, and until within the last five years they were the best that the profession possessed. The dissatisfaction with them was clearly shown by the constant aim to discover something that would give better results. In a few cases they had served the purpose well, and in the future would be resorted to in very few selected cases. But the better knowledge of the anatomy of the prostate gland and its pathology called for an advance in therapeutic resources that did something more than to secure relief with a constant menace to the life of patients through infection, as well as a method that did not require eternal vigilance and a knowledge of the fact that the life of the individual depended upon the mechanics of artificial urination.

DR. A. C. BERNAYS, St. Louis, Mo., dealt with the "Pathology and Etiology of Prostatic Hypertrophy and Suprapubic Drainage as a Method of Treatment." Suprapubic cystotomy was an operation which found its application in stone in the bladder, tumors and growths, hypertrophy of the prostate, foreign bodies, exploration of the bladder, and drainage of the bladder. It was a recognized and successful method of treatment in all of these conditions. The technique varied with the object in view. Some ten years ago the speaker had the notion that suprapubic drainage would cure prostatic hypertrophy. He reasoned that by the drain he could give complete physiologic and mechanical rest to the bladder; he could prevent the unrest due to the alternate filling and emptying of that viscus. He had hoped that the hypertrophied prostate under the influence of rest would undergo absorption and atrophy, and that a decrease in size, which might be permanent, would take place. In this latter hope he was disappointed. In all cases of hypertrophy of the prostate in which he made free permanent drainage for from three to ten weeks, the urine became normal in color, the cystitis was much improved, and in some cases entirely cured. He was convinced that as a radical cure of prostatic hypertrophy the suprapubic drainage was a failure. He spoke of hypertrophy of the prostate as a form of neoplasm or tumor. It was either a diffuse myomatous hypertrophy, or it was a localized formation of nodular myomata except in rare instances. Myoma could not be made to disappear by castration, either in men or in women, nor could it be made to do so by giving the parts in which the myomata were located physiologic and mechanical rest by means of the suprapubic drainage. His training and feelings were so much opposed to operations in the dark that the Bottini and even the popular internal urethrotomy could receive no support from him.

DR. C. H. MAYO, Rochester, Minn., discussed "Suprapubic Prostatectomy." Prostatic surgery had developed from suprapubic cystotomy. Statistics should only be considered in a general way, as representing the developing stage of prostatic surgery. One-half of the enlarged prostates could be reached either from above or below equally well, one-fourth better from above, and one-fourth better from below, and a few would

require a combined operation. The method of operation was influenced by the condition of the gland, and by other known and oftentimes unknown conditions. The lateral lobes were glandular and encapsulated; the middle might be glandular and encapsulated, or a muscular bar, or hypertrophy of mucous glands and bladder tissue. Of known conditions which influenced one's choice, the fleshy individual with thick perineum, long prostatic urethra, and high-lying prostate was one for suprapubic or combined operation. Large dilated bladders were easily reached from above, and small contracted bladders more easily from below. Those with stone present and enlarged prostate were best made from above. Of unknown conditions which influenced one's choice, he had cases of symptomatic stone not found by search, and emergency operations made in the country. These were the cases in which the suprapubic incision was the most satisfactory. Those with cystitis and old or acute secondary changes in the testes would often improve after castration. There was still a large class of prostatic sufferers in whom there were no symptoms of stone, little or no cystitis, and short perineal distance in which a perineal operation was unquestionably the better method. The ease of operation, perfect drainage and earlier recovery in chosen cases no doubt justified this choice. The special retractors of Syms and Ferguson simplified the accessibility of the gland from below, and it was quite possible from present indications that this method would be developed into the operation of the future by making earlier diagnosis of conditions and operating before the patients reached the stage of necessary suprapubic incision. Before suprapubic operation, a hypodermic of morphia was given to reduce the amount of the anesthetic. Usually chloroform was indicated, but ether was preferred. The Trendelenburg position with air inflation of bladder and finger enucleation of enlargements after incising the capsule. Suprapubic drainage should be established by closing the bladder over the tube by Witzel's method.

DR. LOUIS E. SCHMIDT, Chicago, read a paper on the "Indications and Limitations for the Bottini Operation." After discussing at length the indications and limitations of this operation, he concludes that good results of the Bottini operation will depend on the correct selection of cases, the proper technique of the operation and proper after-care, and the immediate correction of errors or mishaps.

How Shall We Treat Sepsis Following Labor and Abortion?

DR. W. O. HENRY, Omaha, in a paper on this subject, took the ground that it was important to remember that sometimes malarial and other fevers followed closely upon abortion and labor, and all such cases should be carefully distinguished from true puerperal sepsis; but having once fully determined that infection has really occurred along the genital tract, only one line of treatment was justifiable in the present state of our knowledge. Although he admitted the different varieties of infection, yet, since it was both unsafe and impractical at the present time to wait for bacteriologic examination, and since, further, the treatment he recommended was safe, practical, curative, and within the reach of every physician, he insisted upon its universal adoption. After giving somewhat elaborately the reasons for his belief, he summarized as follows: 1. Remove early with the finger, sharp curette and flushing, all debris, decidua, blood clots, and sloughing tissue which may be infected, from the uterus and from all raw surfaces in the cervix, vagina and vulva. 2. Dry all of these raw surfaces and freely apply to them 95 per cent. carbolic acid, washing away the surplus acid with sterile water. 3. Unless hemorrhage requires, leave no tubes nor packing of any kind in either the vagina or uterus. 4. Have simply carbolized 2 per cent. vaginal douche used twice a day thereafter. 5. Open the bowels freely with calomel, one-half grain every hour for four hours, then follow with Rochelle salts, until sufficient action has occurred. 6. Give quinin, three grains every four hours, followed by tincture of chlorid of iron, 15 drops, in water. 7. Give good nourishment with milk, eggs, and stimulants every four hours. 8. Let this be the routine early treatment, and hysterectomy will be rarely required. 9. When fixation of uterus occurs, and infiltration takes place in Douglas' cul-de-sac or the broad ligaments, or when the tubes or ovaries fill with pus in acute cases, open promptly and drain through the vagina. 10. If multiple abscesses occur in the uterine wall, or the walls become badly infected, or, if necessary, to get perfect drainage for a badly infected pelvic cavity, remove the uterus and all else necessary by the vaginal route. The abdominal route is dangerous in all acute cases, and is seldom, if ever, justifiable.

New Method of Anchoring the Kidney.

DR. BYRON B. DAVIS, Omaha, said that this method can best be explained by giving a report of the only operation yet done by it. A. J., unmarried female, aged 21 years, had frequent gastric crises, and a good deal of constant lumbar pain, on right side especially. Had lost 25 pounds in weight during the past year, and was very anxious for relief. On examination the right kidney was found freely movable, falling so low that the upper pole could be felt on bimanual examination. The left kidney was also somewhat movable. Patient entered hospital Nov. 9, 1901, for operation on right side, which was done November 11. The incision extended from the lower rib to near the crest of the ilium, a hand's breadth to the right of the spinous processes of the vertebræ. The fatty capsule was reached just anterior to the outer border of the quadratus lumborum, and was opened and a large part of it trimmed away. The kidney was pushed into place by a cylindrical pad placed under the abdomen. When the kidney was well exposed, an incision was made through the proper capsule from one process below the upper pole to a point 2 cm. above the lower pole. This incision was placed vertically on the posterior surface near the convex border. The capsule was stripped loose from the kidney substance from a distance of three-fourths inch anteriorly and posteriorly to the incision of the capsule. From the upper and lower extremities of the vertical incision a perpendicular incision three-fourths inch long was made through the capsule, this giving two flaps of capsule three-fourths inch wide by about two and one-half inches long. Next a strip the thickness of one's little finger of the other border of the quadratus lumborum muscle was split off from the remainder of the muscle, the fibers being separated by the handle of the scalpel. This separation extended from the muscular attachment to the twelfth rib downward for two and one-half inches, or the slit in the muscle was made as long as the length of the capsular flaps before described. Next, an artery forceps was passed through the slit in the muscle, made to grasp the free border of the posterior flap of the kidney capsule and then withdrawn, bringing the flap of the kidney capsule through the slip in the muscle. The two capsular flaps were next brought together over the bundle of muscular fibers, thus isolated from the border of the quadratus lumborum, and stitched together with a running suture of fine chromic catgut, the needle being allowed to penetrate the muscular bundle at two or three places. The lumbar wound was next closed by tier sutures of catgut, the skin wound being closed with horsehair. Aside from a slight infection, the wound did well. Patient was allowed up on the 22d day. The kidney thus far was in place, and the patient relieved of her former symptoms, although it was too early to predict anything of the final result. This method was reported because it represented a new principle in treatment.

Intestinal Obstruction from Meckel's Diverticulum.

DR. A. E. HALSTEAD, Chicago, presented the following summary of all cases in the literature that were accessible to him: Total number of cases reviewed, 72; males, 45; females, 17; sex noted in only 62; result noted in 65; deaths, 44; recoveries, 21; percentage of mortality, 67.6; percentage of recovery, 32.4; cases operated on, 55; death in cases operated on, 27; no operation in 17; percentages of death in cases operated on, 49.0+; attachment or non-attachment of diverticulum or diverticular ligament, mentioned in 66; point of attachment noted in 44; to mesentery in 21; to umbilicus in 14; not determined in 3; diverticulum attached, 47; and diverticulum free, 19.

Grave Abdominal Injuries Without External Evidences of Traumatism.

DR. R. HARVEY REED, Rock Springs, Wyo., read a paper in which he discussed this subject. From reading the literature, together with his own experience, he was led to the conclusion that it was the surgeon's duty to make an exploratory incision in all cases where there was grave doubt as to the real nature of an injury, and particularly so when the constitutional symptoms pointed to a condition more serious than was indicated by either the subjective or objective symptoms, provided the physical condition of the patient was such as to warrant such an operative procedure.

Immediate Effects of Intestinal Exposure.

DR. A. W. ABBOTT, Minneapolis, detailed a great many experiments on animals with a view to determining the immediate effects of intestinal exposure. From his experimental work he concluded that in operations where the intestines were exposed, the loss of water was unimportant, except in so far as it influenced the loss of heat and the drying of the surface; that the loss of heat was very important, as it temporarily placed the temperature of the intestines below the safety line of vital action, and secondarily the heat of the whole body below that which should be continuously maintained; that the drying of the peritoneum was so decided that it must disturb to some extent the anatomic relations, and the resisting and recuperating power of that membrane; that the loss of heat and the drying process must suspend for an undetermined period some of the physiologic functions of the peritoneum, and influence, to a degree as yet unknown, pathologic conditions. These conclusions the modern surgeon had reached clinically, in a general way, as shown by a short incision, protection pads, a minimum exposure of the peritoneum, and short-time operations. The writer believed that the exposure of the peritoneum should be the subject of a more critical study, and that this should be supplemented by extended experiments on the later effects, especially in their relation to peritonitis and adhesions.

Our Hospitals.

DR. H. D. NILES, Salt Lake City, spoke on this subject. He said it was very evident to the minds of physicians familiar with the situation that the methods and management that had served hospitals so well when their purpose was limited to the care of the sick within their walls, would not suffice if the hospitals were to meet present needs and fulfill their possibilities as a great system of scientific institutions distributed throughout this country, where not only the favored few but the whole profession with all the sick entrusted to their care might feel the results and participate in the benefits. So long as a hospital measured its own usefulness by the number of patients treated, the standing of each member of the staff would be estimated largely by the size of his personal following; and the commercial spirit would rule both the institution and the individual to the exclusion or great detriment of scientific work. If the profession was ever to secure a voice, it should formulate and adopt a business code that should not only meet the highest requirements of the ethics of the profession, but at the same time command the respect and win the confidence and support of the 20th century public. The object of the paper was to arouse, if possible, a more active interest in an institution that promised with the aid of medical men to become one of the most influential elements in the medical world.

Surgery of Spina Bifida.

DR. VAN BUREN KNOTT, Sioux City, Iowa, discussed the varieties of spina bifida, the clinical features, diagnosis, prognosis and treatment. After reporting four cases, he drew the following conclusions: "1. Owing to the distressing nature of the affection, the high mortality should not prevent attempts at surgical relief. 2. Meningoceles, meningomyeloceles, and syringomyeloceles may be considerably benefited by operation. 3. The improvement in function can not with certainty be estimated before operation, and pronounced evidences of nervous disturbance are not a contra-indication to excision. 4. Asepsis is absolutely essential and, although difficult to secure, may be maintained by exercising extreme care. 5. The plan of having the suture lines of the meninges and the overlying tissues on different planes will in the majority of instances prevent leakage of cerebrospinal fluid. 6. The suggestion of Pearson to prevent the escape of this fluid during a prolonged operation by stuffing the canal with gauze is valuable. 7. Large bony defects may be effectually closed by muscle much easier than by osteoplastic methods. 8. It is not necessary to keep the child off its back during the healing of the wound, as is frequently advised. 9. Children with hydrocephalus accompanying spina bifida should not be subjected to operation."

Other papers were read as follows: "Two Cases of Cysts of the Broad Ligament Complicated with Myxoma," by Dr. Edward Hornibrook, of Cherokee, Iowa; "Diffuse Sarcoma of the Uterus," by Dr. D. S. Fairchild, of Clinton, Iowa; "New Operation for Wandering Kidney," by Dr. E. Wyllys Andrews, of Chicago; "The Operative Relief of Impaired Function of the Elbow-Joint Due to Faulty Re-attachment of a Separated Internal Humeral Epicondyle," by Dr. G. G. Cottam, of Rock Rapids, Iowa.

The following officers were elected for the ensuing year: President, Dr. James E. Moore, Minneapolis, Minn.; 1st vice-president, Dr. J. R. Hollowbush, Rock Island, Ill.; 2d vice-president, Dr. W. W. Grant, Denver, Colorado; secretary-treasurer, Dr. George H. Simmons, Chicago.

St. Joseph, Mo., was selected as the place for holding the next annual meeting; time, December 29 and 30, 1902.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

PRESCRIPTION WRITING, VIII.

(Continued from page 59.)

Incompatibilities.

Prescriptions may be regarded as incompatible when they include drugs which oppose each other in their physiologic action, or when an ingredient, administered in a liquid form is insoluble in the mixture containing it, and when an ingredient is thrown out of solution by its admixture with other liquids. However, substances which are insoluble in the ordinary solvents may not be regarded as incompatible unless an even distribution can not be made through the menstruum or vehicle. A prescription is also incompatible when by combining two or more ingredients a chemical change takes place.

Incompatibilities, therefore, may arise: 1, therapeutically; 2, pharmaceutically; and 3, chemically.

PHYSIOLOGIC INCOMPATIBILITY.

Therapeutic incompatibilities take place when drugs are prescribed together which are opposite in their action upon certain parts of the system. To avoid such incompatibilities it behooves the practitioner to exercise care unless such actions are desired. The druggist is not bound to checkmate such combinations, because it is not unusual for such prescriptions to be written by the physician in order to accomplish a certain purpose. For example, in some conditions of the pulmonary circuit where there is marked congestion, perhaps from pneumonia or chronic endocarditis in some form, it may be desired from the nature of the condition to prescribe digitalis, but to avoid the high arterial tension produced by this drug, some preparation may be combined with it or given in alternate doses with the digitalis to relieve the arterial tension by producing an opposite action upon the coats of the vessel.

For such purposes the nitrites may be given. Consequently, a prescription containing such a combination as the foregoing would be regarded as therapeutically incompatible, and yet with a proper knowledge of their action, incomparable advantage sometimes may be accomplished by that method.

The prescribing of aloes with the iron preparations is of service in preventing the constipating effects of the iron; these

drugs are frequently administered together in the form of pilula aloes et ferri. It is common to include extract of hyoscyamus or extract of belladonna in laxative or purgative pills to prevent them from griping by regulating peristalsis. Caffein citrate may be combined with acetanilid in such quantities as to counteract its depressant effects on the heart. Likewise in certain individual drugs there are found principles which are antagonistic to one another in their action; in jaborandi, opium, and rhubarb, for example, there are certain antagonistic principles which exist in such proportions that one drug acts as a corrective to the other and not as a neutralizer. Morphin when given hypodermically is guarded in its action upon the heart and respiratory centers by atropin combined with it.

PHYSICAL OR PHARMACEUTICAL INCOMPATIBILITY.

A prescription is pharmaceutically incompatible when the combined ingredients composing it do not form a clear solution; however, no chemical change takes place. For examples, oily preparations and insoluble powders are pharmaceutically incompatible with water. A combination of acids and glycyrrhiza will cause the active principle glycyrrhizin to be precipitated.

Chloral hydrate will not mix with alcoholic solutions, but separates to the top of the mixture and unless the mixture is properly shaken before being administered the first few doses may contain an excess of chloral.

So in prescribing fluid extracts in aqueous solutions, their constituents, such as gums, resins, albumins, or mucilages, may be separated and thrown out of solution.

The sugar in syrups becomes crystallized if alcohol or alcoholic preparations are used in the combination.

Volatile oils should not be prescribed with aqueous solutions in greater proportion than one drop of the oil to an ounce of water in order to avoid physical incompatibility.

Saturated solutions of a drug should not be prescribed with aromatic aqueous solutions, as the volatile principle in the water will be liberated and the mixture will become cloudy. However, the taste of the bromids or iodids, in smaller quantities, is masked better when prescribed with the aromatic waters such as aqua menthæ piperitæ or aqua menthæ viridis than by the syrups.

Fluid extracts and tinctures containing resinous principles should not be prescribed with water, for the resins which are held in solution by the alcohol in the tinctures are precipitated by weakening that menstruum; under such circumstances if it is desired to use aqueous rather than alcoholic solutions, resinous principles may be suspended in an emulsion by adding mucilage of acacia, or tragacanth, which is sometimes used in its stead because its preparations preserve better.

(To be continued.)

Itching from Frost Bites (Chilblains).

Tincture of iodin lightly painted over the affected parts will, in the majority of cases, relieve the itching. As a temporary relief, immersing the parts involved in a mustard bath should be resorted to. The following combinations locally applied are very highly recommended in such cases:

℞.	Pulv. camphoræ	3i	3|75
	Vaselini	3iv	15

M. Sig.: Rub in well, night and morning; or:

℞.	Ichthyol	3iss	5|62
	Pulv. camphoræ	3i	3|75
	Lani	3ss	1|87
	Vaselini	3iv	15

M. Sig.: Apply locally night and morning and cover with cotton wool.

An application containing cocain may be used in case none of the foregoing will control the subjective symptoms. It may be combined as follows:

℞.	Cocainæ hydrochloratis	gr. iii to v	20-30
	Bismuthi subnitratis	3ss	1|87
	Vaselini	3ss	15

M. Sig.: Apply locally night and morning.

To Prevent Chordee.

Dalton, in *Edinburgh Med. Jour.*, recommends the following as an injection:

℞.	Sol. morphinæ hydrochlor.	m. xv	1
	Cocainæ hydrochlor.	gr. ss	|03
	Aquæ q. s. ad	3ii	7|5

M. Sig.: Inject into the urethra and retain for five minutes before retiring.

As an injection for residual gleet he states that astringents are required (after the irrigation treatment) when there is a thin glycerin-like discharge. The following combination is employed by him:

℞.	Zinci sulphatis		
	Plumbi subacetatis, āā	gr. ss-gr. iii	03-20
	Tinct. catechu	m. x-xxx	|66-2
	Glycerini	3ss-3i	2-4
	Aquæ q. s. ad	3i	30

M. Sig.: Use as an injection.

Treatment of Catarrhal Conjunctivitis.

The following is recommended by Terrier:

℞.	Ammon. chloridi	gr. i	|06
	Zinci sulphatis	gr. iiss	|15
	Camphoræ	gr. 1/6	|01
	Aq. destil.	3iiiss	13|12

M. Sig.: Instill into the eye once or twice daily.

Formula for Chafing.

Dr. R. B. Elderice recommends the following in treatment of chafing under the arms and in the groins of infants:

℞.	Ichthyol		
	Tr. benzoini comp.		
	Acidi borici, āā	3i	3|75
	Petrolati	3ii	60

M. Sig.: Apply frequently through the day.

Ether Compresses in Strangulated Hernia.

George, in *Jour. des Pract.*, reports two cases of strangulated hernia in which he could produce no effects by taxis. He saturated compresses with ether and applied them to the parts and at the same time produced moderate taxis. After the compresses were kept in position for several hours reduction was accomplished without much difficulty.—*Amer. Med.*

Local Treatment in Erysipelas.

J. B. Sloan, Detroit, recommends the following in treatment of erysipelas:

℞.	Tinct. opii	3iv	15
	Ext. aconiti flu.	3ii	7|5
	Ext. belladonnæ	3iv	15
	Ext. veratri viridis flu.	3iii	11|25
	Ichthyol q. s. ad	3iv	120

M. Sig.: Apply every three hours.

Treatment of Dysphonia (Hoarseness).

The voice should be used as little as possible. The cause should be ascertained and removed if possible and the following gargle can be employed in case of emergency when it is desired to use the voice in singing or speaking.

℞.	Acidi tannici	gr. xl	2|66
	Boroglycerin	3iss	6
	Tinct. capsici	m. xx	1|30
	Infusi rosæ q. s. ad	3v	160

M. Sig.: Use frequently as a gargle.

Tinea Tonsurans (Barber's Itch).

The following combination is a serviceable one for the cure of barber's itch:

℞.	Ichthyol	gr. xxxv	2|33
	Sulphuris præcip.	3ii	7|50
	Vaselini	3iss	45

M. Sig.: Apply locally at night.

Employment of Bitters in Anorexia.

According to Huchard, as stated in *Amer. Med.*, the drinking of water before meals increases the hydrochloric acid in the gastric secretions more than does the use of bitters, and as

bitters often cause the sensation of hunger he seldom prescribes them. The use of small quantities of alkaline salts causes marked increase of gastric secretions. The following may be used:

℞. Sodii phos. (neutral) .....3iii 11|25
Sodi bicarb. .....3iss 5|62

M. ft. cachets No. 1. Sig.: One cachet, a half-hour before each meal.

To increase digestion the following should be given after meals:

℞. Acidi hydrochlorici .....m. viii |50
Elix. curacao .....℥ii 60
Aq. destil. .....Oi 480|

M. Sig.: A wineglassful after each meal.

Medicolegal.

Duty of Company Assuming Charge of Injured Person.—The Supreme Court of Mississippi holds, in Dyche vs. Vicksburg, Shreveport and Pacific Railroad Company, that the company, having assumed charge of an injured person, although it was not liable for his original injury, was charged with the duty of common humanity. It was to be charged with no higher degree of duty than that of ordinary humanity, but the jury must settle that on the facts.

Treatment of Cases by Secretary of Board of Health.—The Supreme Court of Tennessee says, in disposing of the case of Knox vs. the Mayor and Aldermen of the City of Knoxville, that the Court of Chancery Appeals held, on the proof, that the complainant was not employed to render the professional services in the treatment of smallpox patients during the prevalence of an epidemic for which he sought to recover payment, and that, so far as the city was concerned, they were rendered gratuitously and wholly without authority to bind the mayor and aldermen. It says, too, that the court found there was nothing to show that the city authorities accepted his services, or could in any way have prevented them; and that the city was given no notice that he was rendering the services charged for, and was relying on the city for pay. The fact, it goes on to state, was that at the time he claimed to have rendered these services he was in the employment of the city at a salary of $300 per annum, as secretary of the municipal board of health. The city authorities were well warranted in believing that he was rendering these services in connection with his office. Wherefore, the Supreme Court holds, under the facts found, and the law governing the case, the city was not liable for the services. Moreover, it holds that the city physician had no authority to employ him to perform such services at an extra compensation, nor any authority to incur any liability against the city.

Court of Appeals on "Oxydonor" Patent.—The United States Circuit Court of Appeals, Eighth Circuit, in Mahler vs. Animarium Company, expresses the opinion that the patented device covered by the Sanche patent, No. 587,237, of July 27, 1897, considered by itself, and apart from the force, if any, that is thereby utilized, contains no features of novelty entitling it to a patent; it being nothing more than a wire connecting two metal pads. It is furthermore of the opinion that if what is ordinarily termed an "electric current" is generated or occasioned by the attachment of the wire to two objects of a different temperature or different polarity, and if the curative effect of the device when applied to a patient is due to a slight electric force or energy thereby generated, then the device is wanting in patentable novelty. There is nothing new, it says, in the idea of using electric energy to heal disease, although it may not be well enough proven to be accepted as an established scientific truth that electricity does effect cures. Then, the court says that it has been forced to conclude, after a careful study of the specification in the patent, that the theory enunciated by the inventor, that most diseases are "due to a disturbance of the electrical equilibrium of the body," is a mere pretense; that is to say, a theory not entertained by the inventor in good faith, but put forward as an imaginary hypothesis merely for the purpose of obtaining a patent on a very simple contrivance, which was not patentable unless the claim was reinforced by some such pretended discovery. Likewise, it also concludes that the statement in the specification to the effect that the inventor does not by means of his device make use of "dynamic currents," but relies on some other mysterious and unexplained property of electricity to effect cures, is a statement which rests upon no substantial foundation, and was most likely inserted in the specification for the purpose of forestalling objections to the granting of a patent which would probably have been made if it had been conceded by the inventor that an electric current was generated and flowed along the connecting wire, to which the healing effect of the device might be attributable. For these and other reasons, the court holds that the patent in suit does not describe or cover a patentable device, and that it ought not to have been granted.

Ratification of Employment of Physician.—The case of Steiner vs. Polk County, Oregon, was brought by a physician and surgeon to recover $125 for professional services rendered to a minor who was severely injured by a gunshot wound necessitating the amputation of his leg, but who was unable to provide himself with proper care or attention, and had no relatives or friends able or willing to help him. The case was of urgent necessity, and, as the County Court was not in session, the judge thereof advised and recommended that the patient be taken to a certain hospital for treatment, and requested this physician to give him necessary medical attention, and present his bill to the County Court; saying that he did not know what the court would do, but was satisfied it would allow a reasonable compensation for his services. In pursuance of this arrangement, the physician had the patient removed to the hospital, provided with care and attention, and rendered him such professional services as were necessary. The County Court thereafter allowed and paid bills for the patient's care, board, and hospital charges, but upon the presentation of the physician's claim for professional services ordered that $41.75 thereof be allowed, and that the sum of $83.25 be disallowed. This action the physician refused to abide by, and obtained a judgment in his favor, in this case, which the Supreme Court of Oregon has affirmed. It says that there was no controversy in this case as to the value of the services rendered, the sole defense being that the county was not liable, because there never was any contract binding upon it to pay for such services. But the Supreme Court considers it immaterial whether the county judge had authority in the first instance to make a contract with the physician or not, because it holds that, after the contract or arrangement had been made and the services rendered, the County Court, in effect, ratified and approved the same. It paid the bills for all incidental expenses incurred by the physician, and when his claim for services was presented and under consideration it did not deny liability or repudiate the contract, but allowed thereon the sum of $41.75; thus, in effect, recognizing its validity, objecting thereto only on the sole ground that the amount charged was unreasonable. There could be no question, the Supreme Court declares, if the defendant were an individual or private corporation, that such an act would amount to a ratification, and it thinks the same result follows in the case of a public corporation.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

New York Medical Journal, December 28.

1 *The Prevention of Laceration of the Perineum in Labor. George B. Twitchell.
2 *The Prevention of Laceration of the Perineum in Labor. Maurice A. Walker.
3 *The Prevention of Laceration of the Perineum in Labor. J. L. Andrews.
4 *A Retrospective Survey of Some of the Essential and Vital Principles Pertaining to Ano-Rectal Anatomy, Physiology, Pathology and Nomenclature in an Effort Against the Present Attempts to Radically Change and Subvert Them. William Bodenhamer.

5 Indications of Treatment in Cases of Uterine Myomata. George Tucker Harrison.
6 Report of the Committee of Seven of the Medical Society of the County of New York on the Prophylaxis of Venereal Disease in New York City. (Concluded.) Prince A. Morrow.
7 Bimanual Direction of the Head in Carus' Curve. James D. MacGaughey.
8 Both Too Rapid and Too Slow Expulsion Should be Prevented. John A. Lane.
9 Manual Retraction of the Perineum Between Pains. Theresa Bannan.
10 The Value of Partial Anesthesia. Frank S. Nicholson.
11 Fomentations and Episiotomy. Stanley P. Warren.

Boston Medical and Surgical Journal, December 26.

12 *Some Surgical Tendencies from a Medical Point of View. Reginald H. Fitz.
13 *Successful Operation Upon a Case of Brain Abscess Following Suppurative Middle-Ear Disease. Frederick L. Jack.
14 *Study of the Aphasia Persisting During Convalescence After Evacuation of the Brain Abscess. George L. Walton.
15 *Congenital Elevation of the Shoulder. Joel E. Goldthwait and Charles F. Painter.
16 Tubal Pregnancy with Double Pyosalpinx. C. H. Hare.
17 A Plea for Pain and Patient. Edmond R. Moras.

Medical Record (N. Y.), December 28.

18 The Neurotic Indications of Pre-Senility. Allan M. Hamilton.
19 Clinical Report of a Second Series of Twelve Cases Benefited by Bottini's Prostatectomy. Ramon Guiteras.
20 *On the Transmission of Yellow Fever by Vessels and Its Bearing upon Quarantine Regulations. Edmond Souchon.

Philadelphia Medical Journal, December 28.

21 Medical Care and Treatment of Inebriety. T. D. Crothers.
22 *The Typhoid Spine. William J. Taylor.
23 Cystic Liver. Israel Cleaver.
24 *The Relation of the Middle Turbinate Body to Chronic Diseases. Charles H. Baker.
25 *The Relation of the Sympathetic Nervous System to Functional Amblyopia. Harry S. Pearse.

Medical News (N. Y.), December 28.

26 *Some Surgical Tendencies from a Medical Point of View. Reginald H. Fitz.
27 *Treatment of Lobar Pneumonia. Charles G. Stockton.
28 On the Role of the Prostate Gland in Gonorrhea. Frederic Bierhoff.
29 The Neurotic Element in Infantile Eczema. Jerome Kingsbury.

Cincinnati Lancet-Clinic, December 28.

30 Professional Ethics. F. O. Wright.
31 The Need of Mental Culture. Brose S. Horne.

American Medicine (Philadelphia), December 28.

32 *Massive Infiltration Anesthesia with Weak Analgesic Solutions (Modified Schleich Method). Rudolph Matas.
33 *Technic of Fixation of Prolapsed Kidney. Augustin H. Goelet.
34 *Trophoneurosis Affecting the Hair, with Photographs of a Case. F. Savary Pearce.
35 *Observations on Tuberculosis. Henry B. Dunham.
36 *Nephritis in Malaria. John T. Moore.
37 Ludwig's Angina Complicating Typhoid Fever. William S. Robertson and Charles C. Biedert.

St. Louis Medical Review, December 28.

38 Puerperal Convulsions. T. J. Townsend.

New Yorker Medicinische Monatsschrift, November.

39 Zur Behandlung Tuberculoser Halsdrusen. Carl Beck.

Southern Medical Journal (La Grange, N. C.), December.

40 Strangulated Hernia. S. Uthgate Leigh.

Archives of Pediatrics (N. Y.), December.

41 *Primary Intestinal Tuberculosis in Children; Its Frequency and the Evidence of Its Relation to Bovine Tuberculosis. David Bovaird, Jr.
42 A Case of Primary Intestinal Tuberculosis. David Bovaird, Jr.
43 *Great Fluctuations in Temperature in the Terminal Stage of Pulmonary Tuberculosis. Samuel S. Adams.
44 *Treatment of Tuberculosis in Infancy and Childhood, with Special Reference to the Use of Guaiacol. B. K. Rachford.
45 *A Note on the Little Finger of the Mongolian Idiot and of Normal Children. J. Park West.
46 A Case of Myotonia Congenita. Charles F. Gardiner.

The Post-Graduate (N. Y.), December.

47 Colloid Cancer of the Stomach and Omentum: Diagnosis by Abdominal Paracentesis. Stephen S. Burt.
48 Gastroptosia in Its Relation to Hyperchlorhydria and Tachycardia. A. Rose.
49 Clinical Bacteriology. Hermann Lenhartz.
50 Notes from the Clinics (Pediatric Practice). A. Caille.
51 Fourth Report of the Committee of Inspection Appointed by the Executive Committee of the Post-Graduate Medical School to Review the Experiments of Dr. John F. Russell in the Treatment of Pulmonary Tuberculosis at the Post-Graduate Hospital, New York, November, 1901.

Annals of Surgery (Philadelphia), December.

52 *A Contribution to the Pathology, Diagnosis, and Treatment of Subphrenic Abscesses After Appendicitis. Charles A. Elsberg.
53 On the Differentiation Between Inflammatory Processes and Neoplasms of the Bones by the Roentgen Rays. Carl Beck.
54 On the Pathology, Symptomatology, and Diagnosis of Tuberculosis of the Peritoneum. Daniel N. Eisendrath.
55 *Treatment of Tuberculosis of the Peritoneum. Christian Fenger.
56 Tuberculosis Herniosa and Appendicitis Tuberculosa. Edward W. Andrews.
57 Obturator Hernia of the Bladder and of the Fallopian Tube. Reginald J. Gladstone.
58 *Note on X-ray Burns and Their Treatment. Thomas W. Huntington.
59 Contribution to the Surgery of True Cystic Kidney. J. Niemack.
60 Ureteral Anastomosis. William K. Turner.
61 Stone in the Bladder of a Female Child of 4 Years. Miles F. Porter.

Woman's Medical Journal (Toledo, Ohio), November.

62 Vaginal and Cervical Lacerations. Rose T. Bullard.
63 Suppuration of the Cornea. Lily Kinnier.

American Journal of Obstetrics (N. Y.), December.

64 *Ablatio Placentæ. Rudolph W. Holmes.
65 A Case of Fatal Hemorrhagic Diathesis, with Premature Detachment of the Placenta. Joseph B. DeLee.
66 *A Comparative Study of the Immediate Recovery of Patients Following Vaginal Total Abdominal and Supravaginal Hysterectomies. LeRoy Broun.
67 *The Treatment of Intraperitoneal Inflammation and Suppuration in the Pelvis and Vicinity by the Post-Cervical Incision, etc. J. Coplin Stinson.
68 Episodes in Gynecological Practice Among the Insane. W. P. Manton.
69 Considerations Regarding the Best Methods of Conducting Private Obstetric Work. W. Sinclair Bowen.
70 Twisted Pedicle in Ovarian Tumors. William P. Carr.
71 A Case of Fever During the Puerperium, Caused by a Large Lumbricoid Worm in the Intestine. D. W. Prentiss, Jr.
72 Bile-duct Forceps. James F. W. Ross.

Chicago Medical Recorder, December.

73 Case of Resection of Two-Thirds of the Liver for Angio-adenoma, with Exhibition of Patient and Specimen. Carl Beck.
74 *The Infectious Origin of Purpura Hemorrhagica. A. W. Schram.
75 Report of the Pathology of a Case of Purpura Hemorrhagica. W. H. Rubovits.
76 *The Treatment of Rawed Peritoneal Surfaces in Abdominal Operations. J. Clarence Webster.
77 The Mode of Incision in Vaginal Section. J. Clarence Webster.
78 "Quo Vadis," or a Search for the Truth Concerning Tenotomies for Muscular Insufficiencies, etc. Frank Allport.
79 A Case of Aneurysm of the Aorta Simulating Mediastinal Abscess. Otto T. Freer.
80 Case of Symblepharon of the Lower Lid Relieved by Skin Grafting. F. C. Hotz.
81 Morphin and Allied Drug Habits. David Paulson.
82 Superheated Dry Air in the Treatment of Acute Localized Infective and Septic Diseases; Including Pneumonia, Pleuritis, Appendicitis, Osteomyelitis; With Report of Cases. H. J. Burwash.

Northwestern Lancet (Minneapolis), December 15.

83 The Pathologic Process in Chronic Interstitial Nephritis. H. A. Tomlinson.
84 The Examination of School Children's Eyes and Ears. Frank C. Todd.
85 Treatment of Acne. Burnside Foster.
86 Herpes Zoster Ophthalmicus, with Report of a Case. E. Frank Reamer.

Annals of Gynecology and Pediatry (Boston), December.

87 The Treatment of Puerperal Infections at the Boston City Hospital. Frank A. Higgins.
88 Pessaries Versus Operations. George W. Kaan.
89 Osteomyelitis Following Measles. Joel E. Goldthwait.
90 A Clinical Report of Gude's Pepto-Mangan. Samuel Wolfe.

University of Pennsylvania Medical Bulletin (Philadelphia), December.

91 *The Division of the Sensory Root of the Trigeminus for the Relief of Tic Douloureux: An Experimental, Pathological and Clinical Study, with a Preliminary Report of One Surgically Successful Case. William G. Spiller and Charles H. Frazier.

92 *Myositis Fibrosa. Montgomery H. Biggs.
93 Statistical Study of 53 Cases of Left Cecal Hernia, with Report of an Additional Case. Otto H. Forester.
94 *A Study of the Post-Operative Changes in the Blood. Charles H. Frazier and Thomas B. Holloway.

Medical Bulletin (Philadelphia), December.

95 Impetigo Contagiosa—Ecthyma—Sycosis. John V. Shoemaker.
96 Whooping Cough. William C. Hollopeter.
97 Cremation a Sanitary Necessity. William R. D. Blackwood.

The Physician and Surgeon (Detroit, Mich.), October.

98 Thoughts Concerning Medical Progress. Arthur D. Holmes.
99 Insomnia in Everyday Practice. David Inglis.
100 *The Possibility of Transmission of Tuberculosis from Cattle to Man. Owen C. Brown.
101 Stricture of the Urethra and Its Treatment. A. Henri Cote.
102 The Technique of Cocain Anesthesia. Ralph H. Spencer.
103 Practical Thoughts on Diseases of the Heart. James C. Wilson.

Hot Springs Medical Journal, December.

104 Appendicitis. J. E. Gilcreest.
105 Hemorrhagic Malarial Fever. F. H. Williams.
106 Dilatation of the Stomach. F. D. Garrett.

American Journal of Medical Sciences (Philadelphia), December.

107 *Penetrating Gunshot Wounds of the Abdomen. Robert G. Le Conte.
108 *Report of a Case of Sporadic Trichinosis. John Chalmers Da Costa and Rae S. Dorsett.
109 Histological Description of an Eyeball, with Dropsical Degeneration of the Nuclei and Protoplasm of the Rod and Cone Visual Cells of the Retina, Which Clinically Simulated Glioma. G. E. de Schweinitz and E. A. Shumway.
110 *Combined Clinical Report of Two Cases of Aortic Aneurysm Treated by Means of Silver Wire and Electricity. Leonard Freeman and J. M. Hall.
111 A Case of Syphilitic Insanity and One of Paralytic Dementia Simulating Syphilitic Insanity. W. K. Walker, Theodore Diller and R. G. Burns.
112 A Case of Myxedema with a Study of the Blood and Urine During Treatment. Thomas P. Prout.
113 A Fatal Case of Acetanilid Poisoning. Philip King Brown.
114 Ligation of the Common Carotid Artery for Hemorrhage from the Cheek; Hemiplegia; Recurrence of Bleeding; Death. Francis T. Stewart.
115 Report of a Case of Tetanus. J. Norman Henry.
116 Mastitis Complicating Typhoid Fever. Fellowes Davis, Jr., H. S. Patterson, and A. W. Hewlett.
117 *Report of a Case of Lymphocytosis Without Glandular Enlargement, Complicated with Pneumonia. William C. White.
118 *Symptoms Pointing to the Necessity for Operative Interference in Mastoid Suppuration. Wendell C. Phillips.
119 Infection of the Rectum, with Secondary Infection of the Liver, Caused by the Bacillus Influenzæ Similis. W. Ophuls.
120 Sarcoma of the Large Intestine. John H. Jopson and Courtland Y. White.
121 On the Nature of the Disease Known as Erythema Induratum Scrofulosorum. Arthur Whitefield.
122 A Case of Lupus Erythematosus Cured by the X-ray. Richard F. Woods.
123 A Case of Lymphatic Leukemia, Apparently Developing Out of Hodgkin's Disease, Accompanied by Leukemic Lesions and Pigmentation of the Skin, Culminating in Streptococcus Infection. Grover W. Wende.
124 *A Contribution to Clinical Observations on Blood-Pressure. Herbert S. Carter.

Medical Mirror (St. Louis), November.

125 Rudolph Virchow. G. Frank Lydston.
126 Fraternalism in Medicine. I. N. Love.
127 Blood Examinations in Disease. M. R. Hughes.

Proceedings of the Pathological Society of Philadelphia, November.

128 *The Identification of the Colon Bacillus by Reactions Produced in Culture Media Containing Neutral Red. Observations on Reactions of Other Bacteria on the Same Media. R. C. Rosenberger.
129 *Amebic Abscess of Liver. J. Alison Scott.
130 *A Report and Exhibition of the Largest Recorded Aneurysm of the Heart. Roland G. Curtin.
131 A Case of Anemic Necrosis in the Wall of the Left Ventricle Above the Apex of the Heart Associated with Angina Pectoris and Locomotor Ataxia. Roland G. Curtin.
132 A Case of Interventricular Aneurysm Opening into the Right Ventricle by Ulcerative Process, and Aneurysm of the Abdominal Aorta. Roland G. Curtin.

Medical Summary (Philadelphia), December.

133 The Home Treatment of Nasal Catarrh. (Concluded.) Edwin Pynchon.
134 Electro-therapy. J. S. Waller.
135 Craniotomy—Report of Two Cases. A. B. Lichtenwalner.
136 The Diagnostic Value of Eye Symptoms. C. H. Brown.
137 Typhoid Fever. Floyd Clendenen.

Occidental Medical Times (San Francisco), December.

138 *An Address on San Francisco Health Conditions. John M. Williamson.
139 *Address, San Francisco Medical Society. George H. Evans.
140 Gallstones with Interesting Complications. Emmet Rixford.
141 Remarkable Shotgun Wound of the Thoracic Cavity, Followed by Recovery. M. A. Craig.
142 The Relation of Appendicitis to Disease of the Pelvic Organs. George B. Somers.
143 Gastro-jejunostomy: Death from an Unusual Complication. R. F. Stratton.
144 A Case of Progressive Unilateral Atrophy of the Face and Tongue. Alice M. Woods.
145 Tubal Pregnancy Resembling Appendicitis—Tubal Abortion. J. Henry Barbat.
146 Plague. W. H. Kellogg.

American Journal of Surgery and Gynecology (St. Louis), December.

147 Bassini's Operation for Femoral Hernia. J. F. Binnie.
148 Multiple Myomectomy on a Pregnant Uterus Without Interruption of Gestation. L. P. McCalla.
149 Non-Surgical Treatment of Appendicitis. John C. Murphy.
150 Operative Treatment of Cirrhosis of the Liver. George H. Thompson.
151 Tuberculosis of Tubes, Ovaries, and Peritoneum. R. E. Cutts.
152 The Treatment of Certain Gynecologic Patients with Pepto-Mangan. Samuel Wolfe.
153 Woman's Hospital Reports: An Almost Fatal Vaginal Hemorrhage. Emory Lanphear.

Cleveland Medical Gazette, December.

154 A Case of Stricture of the Urethra in a Female, Complicated with Enuresis, Dilatation of the Bladder, Ureters, and Kidneys. L. B. Tuckerman.
155 A Few Remarks on the Routine Examination of Gonorrheics. Frank Oakley.
156 Some Observations on Intubations of the Larynx. William E. Lower.

Merck's Archives (N. Y.), December.

157 The Use of Camphor-Menthol in Diseases of the Nose and Throat. Lewis S. Somers.
158 Neurasthenic Urethritis: Its Preventive and Curative Therapy. (Continued.) J. M. Thompson.
159 An Index of Diseases Alphabetically Arranged, with Their Modern Treatment. G. Bjorkman.

Medical Sentinel (Portland, Ore.), December.

160 The Early Surgical Treatment of Mastoid Disease. Andrew C. Smith.
161 Exploratory Operations. Park Weed Willis.
162 Report of a Case of Myomectomy on a Pregnant Uterus Without Interruption of Gestation. L. P. McCalla.

AMERICAN.

1, 2, 3. **Laceration of the Perineum.**—Twitchell says that it is common to think of a tear as a split from the fourchette backward. This occurs in slight tears but not often in serious ones. Usually the perineum gives way at once. When a child is to be born, this oval opening is not stretched as by an entering wedge, but by having the lower end pushed away from the upper. If in swinging the head, as it extends, it slides on the perineum, the space between the pubes and the fourchette will increase; if it does not slide, the opening will not increase and the perineum will follow the motion of the head, causing decided stretching, but not enlarging the opening. Hence the importance of keeping in the vagina a lubricant which aids it. The natural lubricant is the best and should not be lessened by douches, too frequent examinations, etc. Artificial lubricants do not replace the natural one. Delaying a precipitate labor by chloroform will save the perineum in some cases, and in protracted labor the use of forceps and extraction between pain may be sufficient. The principal thing is to keep the head from coming through too quickly. Three elements are to be considered in the prevention of laceration: 1. The head should be presented in its smallest diameter. The bladder and rectum should be always empty so as not to take up any space. The patient must refrain from the use of voluntary movement at this time. The attendant should retard a too perceptible progress of the labor. In many cases the modified Walcher position is of value in protecting the perineum by its relaxing effect and permitting easy and constant observation.

Walker believes in anesthesia for preventing voluntary muscular contraction and to lessen involuntary ones, and it may be necessary to carry the anesthesia to a surgical degree during

the last few minutes. Many perinea are torn after the expulsion of the cranium by too sudden extension of the head. He avoids this by keeping the head flexed completely until its largest diameter has escaped under the arch. The posterior shoulder should always be looked after, by causing lateral flexion of the trunk.

The cause of laceration, according to Andrews, is the continuance of the powerful force after its necessity has been passed. The most frequent direct cause is imperfect flexion of the fetal head, and decided disproportion between the presenting part and the outlet, or where faulty mechanism is present, and the presenting part is pushed too far posteriorly, and not allowed to emerge safely under the pubic arch. Finally, old lacerations are liable to induce severer ones. The whole subject of prevention may be summed up: 1. Patiently and persistently endeavoring to bring the longest diameter of the presenting part in relation with the longest diameter of the outlet. 2. Securing perfect dilatation of the soft parts at the outlet. The abdominal muscles play by far the most important part in the expulsion of the head and it is an advantage that we have them under our control. He believes in the use of chloroform in these cases. The advice to support the perineum is accountable for many lacerations of the perineum; it is not the perineum which needs support, but the head, until the muscle structures have been stretched. Position is very important; he thinks the lateral better than the dorsal. The parts should be accessible to sight and touch. Forceps in certain cases are of value; for the correction of certain errors in mechanism, overflexion or overextension, they are the best means available. Episiotomy is not advised and is considered ineffective. Lacerations by the shoulders are less excusable than those by the head. If undue haste is avoided and the head lifted upward one shoulder will be behind the symphysis, while the other is safely borne over the perineum.

4. **Rectal Valves.**—Bodenhamer reviews the anatomy and its literature in regard to the rectal valves and believes that he has disproved their existence.

12.—See also ¶26 below.

13. **Brain Abscess.**—Jack reports a case of brain abscess operated upon successfully with perfect recovery.

14. **Aphasia.**—Walton gives the details of a careful examination of the same case and finds that the form partakes of Bastian's amnesia verbalis, resulting from lowered activity of the auditory word center as well as that of commissural amnesia resulting from defective transmission of stimuli to and from that center. It includes Wernicke's conduction aphasia, which denotes a break in the connection between the auditory and kinesthetic center, and is itself included in the comprehensive sensory aphasia of Oppenheim and others and the auditory sensory aphasia of Collins. That the auditory word center was not entirely destroyed was shown by the fact that the patient understood ordinary commands, but that its function was impaired was shown by the patient's inability to understand more unusual words, also his inability to produce spontaneously in conversation the desired word except of the simplest variety. It is probable, that the auditory word center itself was not involved in the encephalitis, but the moderate word deafness was due to impaired conduction of the afferent fibers conveying stimuli to that center "(subcortical sensory aphasia, pure sensory aphasia of Dejerine). The result of such lesion is obviously identical as far as understanding the speech of others is concerned. The diagnostic feature consists in the fact that if the afferent fibers only are affected the patient can still speak spontaneously, because the centers and connecting fibers necessary for this function are intact. It might be inferred, then, that in our case the auditory center was affected because he could not use spontaneous speech perfectly, but here we are met by the probability that the fibers connecting the temporal lobe with Broca's convolution were interrupted, a lesion in itself sufficient to prevent spontaneous speech. This study well illustrates our limitations in the attempt to establish the degree in which the different elements of the speech mechanism are affected in a given case. At the same time, it illustrates the accuracy with which we may differentiate the sensory from the motor form of aphasia. It seems probable that the fibers connecting the visual with the auditory center were interrupted, for he found difficulty in reading aloud, and though he could recognize an object he could not recall its name. The fibers passing in the opposite direction were doubtless also interrupted, for he could not write difficult words from dictation. That the fibers passing from the auditory area to Broca's convolution were probably impaired is shown by the fact that though he could hear and, to a certain extent, interpret from hearing, he could not talk correctly (paraphasia)." There is no reason to think that Broca's convolution was invaded and the case supports the views of Wernicke, Broca, Trousseau, and others, that there is no writing center in the sense of a center in which are stored up the kinesthetic memories of written words. The inability to write in this patient was absolutely coincident with his inability to talk. The case is discussed elaborately. Finally, two months after the examination the patient again presented himself and no defect of speech could be elicited whatever. The only trouble he had was in the use of one or two words. Recovery seemed complete.

15. **Congenital Elevation of the Shoulder.**—Goldthwait and Painter report two cases, one probably due to imperfect development of the muscular structures, analogous to congenital torticollis in which the sterno-cleido-mastoid muscle is imperfectly developed and probably due to injury at the time of birth. In the other case the position of the shoulder was associated with embryonal conditions, there being a distinct articulation between the upper angle of the scapula and the seventh vertebra. Operation on both of the cases produced a certain degree of relief.

20. **Yellow Fever.**—Souchon argues against the statement of Doty that five days from an infected port is sufficient to eliminate the danger of yellow fever introduction and enable us to dispense with quarantine. He reports a number of cases where a longer period elapsed before the outbreak of the disease.

22. **The Typhoid Spine.**—Taylor reports a case and discusses the condition. He thinks that it is hardly possible that it can be solely spinal irritation and that there is really a definite pronounced affection of the tissues in some cases at least. Deformity would seem to be present in these structural cases but absent in purely neurotic ones.

24. **The Middle Turbinate and Chronic Diseases.**—Baker argues for the relation of the morbid conditions of the turbinate to other diseases and describes three classes of cases where they may occur and where its removal is indicated: 1. Where it is associated with polypoid growths which the most careful extirpation with snare, curette, caustic, or cautery will not cure until the turbinate is removed either in whole or in part. The second indication is sinus occlusion by a swollen membrane, which is not polypoid and does not respond to other recognized means of treatment by cleansing and disinfection. He knows of two patients who died from cerebral inflammation that he knows could have been saved by early removal of the turbinate so as to permit free drainage of the infected sinuses. The third indication is fetid crusting of the discharges in the upper portion of the nasal chambers in nonspecific cases. The fifth condition is where the turbinate lies in close proximity to the more sensitive area of mucous membrane and by contact causes various nervous disturbances such as persistent sneezing, cough, asthma, headache, eye reflexes, vertigo, tinnitus, and even chorea and epilepsy which he claims can be caused this way and relieved by this operation. The sixth class is that of vasomotor rhinitis running along throughout the year. He does not claim that removal of the turbinate will cure such cases alone, but it will greatly shorten the period of suffering and give relief. The method of operating is the following: After thorough cleansing, using cocain on a cotton applicator and leaving pledgets for ten minutes between the bone and outer walls, then applying suprarenal extract or adrenalin, the attachment of the bone to the lateral wall is then severed with the Holmes middle turbinate scissors. If the rear portion is out of reach of the scissors it is cut off

with the snare. The cavity is then packed with iodoform gauze, usually removed on the following day and frequent cleansing with borax solution is done by the patient until healing is complete.

25. **Functional Amblyopia.**—The conclusions of Pearse's article are: Our knowledge of the manifold manifestations of the disease, hysteria, in every structure of the body will not permit us to say positively that the retinal elements, the conducting channels of visual sensation, or the visual centers themselves, are free from the influence of this disease. The effect upon the visual apparatus of fright, shock, emotion, mental exhaustion, overexertion, etc., is essentially the same as in hysteria, and whether the sympathetic is concerned in this action is yet a question. In view of the known sphere of action of the sympathetic and of the many cases observed which present the same conditions in the vessels of the fundus which the influence of the sympathetic produces elsewhere in the body, if the sympathetic does not influence the fundus vessels, what does? Until a more plausible source of influence is positively demonstrated, we can not do better than accept this explanation, which is far removed from a theory.

26. **Surgical Tendencies.**—Fitz's article is largely skeptical as regards the value of many surgical operations. He gives a table of the results of exploratory laparotomies in the Massachusetts General Hospital from 1890 to 1900, making a rather poor showing. He does not think that the surgery of malignant tumors is encouraging from the statistics, though a prolongation of life and relief of symptoms may be obtained in some cases. He analyzes the cases that have been operated on in the Hospital and the results rather justify his pessimistic views. Intracranial tumors form another series than have been operated on and from 15 cases found in the decade, subsequent history was known in 10; 8 out of 10 died the month after the operation, the 9th died at the end of ten weeks and the 10th died seven months after a second operation, which followed the first. Other conditions mentioned and discussed are tumors and goiter. He thinks that advanced knowledge in the future should be in the direction of limiting unnecessary and harmful operations, greater accuracy in the diagnosis and prognosis and increased knowledge of pathology and pathologic anatomy.

27. Lobar **Pneumonia.**—Stockton holds pneumonia to be a toxemia. Not every part of the patient's system resists it; the weakest one is apt to be the heart, or the blood-making organs may fail to react and we have a lack of natural leucocytosis. There may be a secondary toxemia develop from a crippling of the liver and kidneys and the nervous system may be so injured that rest is impossible. The functional activity generally is handicapped. We know, however, a few measures that can be tried in almost ever case; one is a prompt calomel purge; another is the treatment of the skin, though we differ in our methods. In the Buffalo General Hospital he invariably employs hot mustard foot-baths following sponging. The general circulation requires attention and these methods relieve high pressure. The depressing drugs are but rarely needed. He has seen great benefit follow the cold bath after the method of the Brandt treatment. Depression of the heart is still more to be feared and his method of meeting this is to strengthen it if possible by the use of strychnia, giving it early, beginning with 1/30 of a grain every two to four hours and increasing it up to even 1/10 gradually if the condition demands it. Baths, nourishment and medication should as much as possible be given at about the same time that they may not interfere too much with rest. The patient should not be disturbed too much even if he sleeps beyond the expected hour, but the nurse should be ready the minute he awakes to prevent depression, nervousness, etc., by prompt administration of nourishment, strychnia and other stimulants, if necessary. We must also bear in mind that pneumonia is a local process, and he thinks it a source of satisfaction when hepatization of one lobe appears early in the disease. Delay appears to increase the toxic action. He gives a suppositious case where there was probable consolidation of the other lung and speaks of the desirability of postponing this. He thinks this can be accomplished, taking advantage of the constitutional symptoms already described. It is a good plan to give an additional dose of calomel, to press the hot foot-bath, support the tissues by increase in the strychnin and resort to local measures to decrease the pulmonary congestion. The best method is blood letting, 4 to 6 ounces of blood from the arm and then use dry cupping very thoroughly over the threatened area. The cup should be large and the suction strong so that a decided impression is made, and liberal inhalations of oxygen have also tided the patient over the eminent danger. In "wandering pneumonia" he thinks approaching consolidation may be aborted in this way. Lobar pneumonia is a disease that needs almost the constant presence of the attending physician in the severe cases, not in the mild ones which have a tendency to abort early. There is one particular condition in which he thinks counter-irritation is advantageous, and that is where there is delayed resolution. He has seen immediate improvement occur after failure of other methods by the use of a large fly-blister. He thinks that we are not yet ready to dispense absolutely with counter-irritation in pneumonia. Finally, experience teaches him that the great fatality of senile pneumonia is mostly from the unusual toxemia, because of the inadequate functional activity of the organs of elimination. If, with stimulating, we at the same time sweat the patient and assist hepatic and renal secretion by proper means, our results will be better.

32. **Infiltration Anesthesia.**—Matas' paper is a description of an apparatus used by him which is practically an adaptation of the Potain aspiratory apparatus, identical with the contrivance described and illustrated by him in the *Philadelphia Medical Journal* of Nov. 30, 1900.

33. See abstract in THE JOURNAL, xxxvii, p. 1339.

34. **Trophoneurosis.**—The case reported and illustrated by Pearce is one of a young woman who had a heavy head of brown hair, which fell out completely within three weeks and was replaced two or three months later with a growth of snow-white hair. Some ten or eleven months since this there has been some slight return of color. There is absolutely no history of heredity of premature grayness. He thinks that trophoneurosis best explains the development of the alopecia and bleaching of the hair, but he does not express a favorable opinion as to the complete restoration of the former condition. There has lately been a general attack of herpes.

35. **Tuberculosis.**—The experience of the Rutland Sanatorium of Massachusetts is summarized by Dunham, who gives a tabulated statement of over 200 cases treated, with the average length of stay of six months. The disease was arrested in 42 per cent., very much improved in over 22 per cent., much improved in 15.4 per cent., improved in a slightly greater proportion and unimproved in less than 4 per cent. The medical management seems to have been largely symptomatic, with no routine treatment. Strychnia in small doses, iodin preparations, hypophosphites, tonics, creasote, ichthyol, methylene blue, etc., were administered according to indications. The term "arrested" as used, means a condition of apparent health. Outdoor life as much as possible is recommended; and he gives a diagram of a bed which is arranged so that the head of it, including the sleeper's head, can be shoved out of the window during the night, and in case of storms coming up he can easily pull himself back. He does not specially over-value the increase in weight under treatment. He thinks that sometimes it is not in itself a real gain. The question of exercise is discussed and says it is to be regulated largely according to the temperature. When a rise of temperature is at all prominent, complete rest in bed is enjoined. Measurement of the chest capacity and physical examinations are employed. As regards hemoptysis he has changed his opinion as to its cause and thinks that increased blood pressure is by far the most important element. It is much less likely to occur according to his statistics in old cases with excavations than in recent incipient cases, and improved drainage may have something to do with this as well as lowered pressure. An absence of drainage might favor hyperemia, causing tension and relief by hemorrhages. Exertion is also a potent factor in its causation.

The routine treatment for hemorrhage in the sanatorium is absolute rest, and quiet, cold fresh air, semi-erect posture, trunk and head cool, heroin for coughing and in urgent cases morphin hypodermically and bandages at the base of the limbs. Common salt and small doses of aconite are used in almost all cases. Ergot is never employed. Suprarenal capsule and calcium chlorid have been used with good results. Securing of free movements of the bowel is an important matter. Preparations of gelatin with a light liquid diet are ordered.

36. **Nephritis in Malaria.**—Moore gives the conclusions of his paper in the following: 1. Nephritis is not likely to occur in a single tertian infection for a short interval, say of five days. 2. A double tertian infection will produce a nephritis in a large percentage of cases if it runs only for a short time. Our percentage is 80 per cent., but I think this is too large. 3. The more chronic the case becomes of any infection the more likely to produce nephritis. 4. Malaria of long duration, or often repeated attacks will produce chronic renal disease as shown by continuous presence of albumin and casts. 5. Estivo-autumnal malaria probably gives the greatest percentage of cases of nephritis, 68.7 per cent. 6. The age of the patient, height of temperature, or specific gravity of the urine showed no relation to the presence of albumin and casts in our cases.

41. **Primary Intestinal Tuberculosis in Children.**—From a study of the subject and a careful review of the literature, Bovaird comes to the following conclusions: "1. That English reports alone show any considerable number of cases of primary intestinal tuberculosis. 2. That primary intestinal tuberculosis is a very rare affection among children in or about New York, little more than 1 per cent. of the cases of tuberculosis having this origin. 3. That the proportion of tuberculous cases found at autopsy in New York is lower than that of European observers. 4. That the evidence connecting tuberculosis among children with the consumption of milk of tuberculous cows is very scant."

43. **Temperature Fluctuations in Tuberculosis.**—Several cases are reported by Adams to illustrate the fact that wide fluctuations of temperature in the terminal stage of tuberculosis in children are not necessarily of immediate serious importance. He says that the temperature may reach 108, and in a few hours drop to 95 without any effect upon the child either mentally or physically. He explains the absence of collapse and the not unusual phenomena of hyperpyrexia by the assumption that some irritant acts upon the heat centers differently from that present in purely septic conditions.

44. **Guaiacol in Infantile Tuberculosis.**—Rachford insists on the importance of early diagnosis and treatment of tuberculosis in children, but the special purpose for which his paper was written is to call attention to the great value of guaiacol in these cases. The prescription which he has used is:

R.	Guaiacol	3i	3|75
	Lanolin	3ii	7|5
	Lard	3v	18|75

M. Sig.: One level teaspoonful to be rubbed into the chest at bedtime each day.

This he has employed in almost every case of tuberculosis of infancy and children for the past eight years and is convinced of its value. In cases where acute symptoms are in abeyance he prefers a substitute of carbonate of guaiacol internally for the inunction treatment. It is easy of administration, and when mixed with a little milk and sugar can be given in powder without causing complaint. It is especially valuable in intestinal and mesenteric tuberculosis. Other remedies are also mentioned, such as creosote by capsule or inhalation, iodid of iron, etc.

45. **The Little Finger in Mongolian Idiots.**—West calls attention to the symptom of curve of the little finger which has been noted in Mongolian idiots, though it is not universally observed. It was first noticed by Telford Smith some fifteen years ago. He has examined over 600 average children and found that in a large proportion of these some curvature is found, and in nearly 20 per cent. a very marked curvature. The symptom therefore is not a characteristic one.

52. **Subphrenic Abscess.**—The symptoms, pathology, diagnosis, frequency, modes of onset, prognosis, etc., of subphrenic abscess following appendicitis are described by Elsberg, who illustrates his article with reported cases and gives an analysis of others. He describes his operation for subphrenic abscess which is by resection of about two inches of the ninth and tenth ribs somewhere between the scapular and anterior axillary lines, according as the exploring needle has revealed the pus anteriorly or posteriorly. They can be resected through one incision made in the intercostal space between them and will expose the diaphragm with the liver moving below, and pleural reflection in the upper part of the wound. If the pleura appears to contain pus, aspiration should be performed, and if it is found the cavity should be opened and drained. If, however, this is needless, the upper part of the wound should be packed with gauze and the needle made to perforate the diaphragm below the resected pleura. If it perforates the abscess it should be allowed to remain in place and used as a director. A small incision of the diaphragm along the side of the needle, dilatation of the small opening with dressing forceps, and drainage according to general principles are all that is needed. If, however, the abscess is so high in the dome of the diaphragm that it can only be reached by the transpleural route, the pleural cavity can be opened through the upper part of the wound. In some cases the inflammation has obliterated the costophrenic sinus so that the pleural cavity need not be opened, and great care should be taken in this case to avoid tearing the adhesions. If the pleural cavity has to be opened it should be done as rapidly as possible, an assistant making upward pressure against the liver while the operator makes a small incision into the pleura. By this upward pressure it is often possible to so closely approximate the diaphragmatic to the costal pleura that little if any air can enter the pleural cavity when the opening is made. Usually, however, one must be satisfied with limiting the quantity of air by this procedure. Sometimes it is impossible to unite the two pleural layers by sutures. Then all that can be done is to wall off the cavity carefully with gauze. Elsberg does not agree with Beck that aseptic tamponade of the pleural sac should always be done. Incision of the diaphragm and evacuation of the pus by drainage of the abscess cavity are performed as already described.

55. **Peritoneal Tuberculosis.**—Fenger reviews the literature of tubercular peritonitis and from a summary of the whole agrees with Borchgrevink that laparotomy is not an efficient method of operation in these cases. He restates Borchgrevink's conclusions as follows: "That the laparotomy, in strong patients in whom fever is absent and their condition of good nutrition speaks for a spontaneous disappearance of the tuberculous process, is well tolerated. Laparotomy, however, in patients with fever, when the tuberculosis has a progressive character, must diminish what slight power of resistance such a patient has remaining. This power of resistance may thus yield, and death follow, or it may, by concurrence of fortunate circumstances, rebound, and the patient recover in spite of the operation. That form of peritoneal tuberculosis which exists without fever, or with only slight fever, runs in itself a favorable course. In such cases laparotomy is unnecessary. In progressive tuberculosis the operation is dangerous and should be abandoned."

58. **X-Ray Burns.**—Huntington reports a case of treatment of *x*-ray burn by excision and skin grafting, which he thinks is an efficient method of treatment of this condition. The excision should be performed through the external border so that all tissues supplied by the defective blood vessels are removed.

64. **Ablatio Placentae.**—This condition consists in the premature detachment of the normally situated placenta, and is extensively discussed by Holmes, who gives a long list of the literature. He finds it occurs about once in 200 pregnancies, and is of clinical importance in about 1 in 500. The difference between the occult and open type is largely dependent upon the external bleeding in the latter. Complete blood retention in the former generally produces an exaggeration of the uterine distention and accessory tumor and more evident shock.

Ablatio is practically an abortion in the latter months of pregnancy. The etiology is nearly identical, the mechanism in certain respects similar; there is often a paralleled threatened abortion. The patient may and often does tide over the difficulty in the mild cases and go on to term. The mild cases must be most carefully watched, quiet induced by morphia if necessary, icebags to the uterus, hydrastinin given instead of ergot, etc. In severe cases treatment will have to be modified by the condition of the os. If this is ready for delivery use forceps, craniotomy and version, using the operations in the order named. Version should never be selected except when unimpeded breech extraction is possible. In severe cases of labor, the labor should be induced as rapidly as possible by friction, electricity, quinin and sugar, general stimulation, etc., and preparation should be made to introduce a Barnes bag. Later the use of larger bags, manual dilatation, or Dührssen's incision when the effacement is complete and he suggests that the oblique cuts offer less danger than those suggested by the originator. If dilatation is present without effacement Dührssen's incisions have no consideration. In severe cases in labor hasten it as much as possible. Tampons should have no place in the treatment. The membranes should be preserved intact until delivery may be expedited. Cesarean section will be of value in selected cases, but never will be popular. If the placenta does not follow the child at once, remove it immediately. Be prepared for postpartum hemorrhage, which is a frequent sequence of the condition. Tampon the uterus early. The best remedy is extraction of the fetus. Apply this precept too early rather than too late.

66. **Recovery After Hysterectomy.**—The various facts brought out in Broun's study lead him to the conclusion that: "1. While the finished result of a supravaginal hysterectomy is most satisfactory, the operation is, however, marred by the possibility of a secondary infection, at times terminating fatally. When this infection does occur it can be reached only by some secondary operation. 2. The chance of this infection occurring is greatest when the subperitoneal space is drained through the canal of the cervical stump, or when the canal is left open. There is every reason to close the stump, as offering the best results. 3. Total abdominal hysterectomy, though not such a finished operation as the supravaginal, is, however, one in which there is less likelihood of any secondary complications, and, though objectionable on account of the suppurating cavity to be closed by contraction and granulation, yet offers to the patient a surer means of uninterrupted recovery. This conclusion, while at variance with Olshausen's large collections of cases, in which he gives a 5.6 per cent. death rate for supravaginal and a 9.6 per cent. rate for fatal hysterectomies, is, however, the only one to be drawn from this collection of consecutive cases brought together here."

67. **Post-Cervical Incision.**—Three cases are reported by Stinson of pelvic inflammation and from the study of these and other reported cases and a comparison of the methods, he draws the following conclusions: "1. That intraperitoneal pelvic inflammation is strictly a surgical disease. 2. That such inflammation should be operated upon as soon as the diagnosis is made, no matter what the state of the disease. 3. That in most cases the disease is best approached and cured through the posterior cervical cul-de-sac incision. 4. That all such inflammatory masses should be freely opened, the cavities thoroughly irrigated with hot antiseptic solutions, dried, and drained with loosely packed borated gauze strips. 5. That gauze drainage should be supplemented and aided by copious vaginal douches of 1 to 1000 hot watery solutions of potassium permanganate, given every three or four hours until discharge, fever, etc., are gotten under control. 6. That the cul-de-sac operation is extremely satisfactory in the treatment of intraperitoneal pelvic inflammation and most of its sequelæ; the possibility of infecting the general peritoneum is very much reduced by operating through the cul-de-sac, as all fluids in the pelvis can be easily and thoroughly evacuated along lines of gravitation. 7. That the vaginal incision, when performed early in the disease, cures nearly 100 per cent. of all cases; and while the late vaginal incision is not always so certainly cured, it is equally important. 8. That in all cases wherein diffuse peritonitis is present one is obliged to complete the operation at once with laparotomy, etc.; for this reason the patient, instruments, etc., should always be prepared beforehand, in readiness, if need be, for very extensive intraperitoneal operations. 9. That the vaginal operation for pus in the pelvic cavity is less difficult to perform than when done through an abdominal opening, and although the surgery is less complete, yet the dangers are less to the patient."

74. **Purpura Hemorrhagica.**—Schram reports a case and discusses the literature. In the blood there was found a number of small, rapidly rotating bodies which had been observed previously by Letzerich and considered by him as spores, but cultures taken from the blood 36 hours before death with all possible aseptic precautions gave pure cultures of staphylococcus aureus on all media. The bacilli found by Letzerich did not seem to have been present or at least could not be produced in the cultures.

76. **Rawed Peritoneal Surfaces.**—The treatment of raw peritoneal surfaces in the abdominal cavity after operation is taken up by Webster, who thinks it has been too much neglected in the past. It is a bad thing to leave such surfaces to produce adhesions. Small patches on the peritoneum, bladder, broad ligaments, etc., can often be sewed up at once with catgut. The areas of omentum which have been freed from adhesions should never be left open; if slight they should be covered with the neighboring omentum; if extensive they should be ligated near their base and then cut away. Adherent portions of appendices epiploicæ should be removed after separation and the raw stumps buried. Raw surfaces on the intestine may be covered with continuous catgut suture, if small, but large ones can not be thus managed, and in some instances it is advisable to detach the flap of the parietal peritoneum if it is lax, or if not, he prefers to cut a thin flap from the omentum and stitch it on the raw surface of the bowel, closing the omental wound with catgut again. In very bad cases it may be advisable to resect the affected portion of the bowel, especially if much of the muscular layer is exposed. On the uterus a small surface may be sometimes covered by a running suture, but if large and numerous, drafts on the omentum may be made. He frequently cauterizes such raw surfaces so as to form a black char, which is less likely to become adherent than a raw, oozing surface. He always cuts or curettes free tags of adhesions close to their base and buries the stump, if possible, under neighboring peritoneum. A thick char can not be produced on the bowel, which can only be lightly touched with the cautery. In removing diseased tubes or ovaries he has entirely abandoned the old-fashioned method of massing the tissues together in ligatures and leaving a raw projecting pedicle. It is more satisfactory to produce no tension in the pedicle and leave no raw surface. If the ovary alone is to be removed it is simply to be cut away at the hilum, the raw surface on the back of the broad ligament being constricted and covered by a double row of continuous catgut. If the tube is to be removed the same procedure is to be carried out, the uterine end of the tube being cut out of the uterine wall to the depth of a quarter of an inch, or burned out when there is any possibility that it is not sterile. When the ovaries and tubes are to be removed he passes a ligature around the upper part of the infundibulo-pelvic ligament to secure the ovarian vessels, and another around the upper part of the broad ligament close to the uterus below the tube to secure anastomosing branches of the uterine vessels. The ovary and the tube are then removed, the uterine end of the latter being cut out of the uterine wall as above described. The raw area of the broad ligament of the uterus is closed and covered with peritoneum by continuous catgut suture. In vaginal extirpation he always tries to draw the ligatured ends of the broad ligaments downward, stitching them into the lateral fornix so that the raw stump remains entirely within the vagina. Within the last two years he has used the following plan when double tubal or ovarian swellings have been adherent behind the uterus, and when removed a raw oozing surface is left. In marked cases in order to cover the raw surfaces he has removed the diseased

swellings and the entire uterus with the exception of its anterior peritoneal layer, leaving this continuous with the broad ligaments, bleeding points on the cut surface of the peritoneal layer and of the vagina being secured. A strip of gauze is passed into the vagina, its ending resting in the pelvis just above the opening in the fornix. The broad ligaments with intervening peritoneum thus forming a flap extending across the pelvis is turned backward and stitched around the wall, so as to form a new covering on the pelvic floor. The same procedure may be carried out after removing bilateral broad ligament tumors where a large raw area is left in the pelvis. After these operations there is always some oozing of blood into the vagina but not to any marked extent. The gauze can be removed on the second or third day according to the amount of discharge and a fresh piece inserted.

91.—This article has appeared elsewhere. See THE JOURNAL, xxxvii, ¶22, p. 1728.

92. **Myositis Fibrosa.**—A case of this condition is recorded by Biggs, who reviews the condition, pointing out its varieties, the primary or idiopathic and the secondary due to trauma, ischemic disturbance, the site of the previously existing abscess or as a sequela of the non-suppurating forms of myositis, such as rheumatism, syphilis, etc., those cases due to the presence of trichinæ in the musculature and those cases occurring in conjunction with scleroderma. The symptomatology is described. The site of predilection is in the leg, the thigh and lower leg alike; there is seldom any febrile reaction or constitutional disturbance of importance, but spontaneous pain occurs with tumor and some tenderness to pressure, possibly disturbance of the thermic or tactile senses. In the secondary form we have a wider distribution of disease. It is most commonly met with in torticollis with less spontaneous pain, less tenderness as the disease subsides into the chronic state and the muscles come to a certain extent to be substituted by fibroid tissue with loss of strength and electric reaction. The prognosis is usually favorable, the condition yielding to prolonged massage and electric treatment. The case reported is apparently one of the primary idiopathic form.

94. This article has appeared elsewhere. See THE JOURNAL, xxxvii, ¶22, p. 1728.

100. **Transmission of Tuberculosis.**—Brown does not believe in the transmission of tuberculosis from milk and the flesh of tuberculous animals. He classifies the infectious diseases of animals, pointing out that diseases of a long period of incubation and slow onset, slightly influenced by treatment, are seldom transmissible, and asks why tuberculosis should be an exception.

107. **Gunshot Wounds of Abdomen.**—A case is first reported and the condition generally discussed. Le Conte recapitulates the most important points as follows: "1. Remove the patient at once to the nearest place where a clean operation may be undertaken. 2. Assure yourself positively that penetration has taken place. 3. Having demonstrated this fact, always open the abdomen and search for injuries, and make this search systematic. 4. Never wait for symptoms to tell you that profuse hemorrhage or intestinal perforation has taken place, for by that time operation will usually be useless. Lastly, remember that cleanliness and thoroughness must never be sacrificed to speed. These two are absolute essentials to success, while speed is no longer an important factor since the introduction of normal salt solution."

108. **Sporadic Trichinosis.**—DaCosta and Dorsett report a case in detail, of which the particular features are that traumatism preceded the apparent onset of the muscular trouble; that pain in the muscle was slight; tenderness of the muscle and edema of the skin were absent; that no antecedent gastro-intestinal attack occurred; that, in spite of the widespread invasion, some diseased muscles (the deltoid) did not appear to be swollen and were not tender and painful, and other invaded muscles (the opposite lower extremities) were enlarged, but gave no evidences of pain, and finally, that eosinophilia was never noted. The relation of traumatism to the trichinosis is a point of interest and he suggests several questions, for instance, whether the seat of injury constituted the point of least resistance toward the larvæ trichinæ as injury often does towards micro-organisms. It is peculiar that the disease should begin in such an unusual situation as the calf of the leg where the injury had occurred. In the conclusion of the paper Dr. Coplin suggests the possibility of a recrudescence of lesions, basing it on the more or less local active lesion (trichina, edema, myositis, etc.), with quiescent trichinæ in other muscles, the absence of marked eosinophilia, the history of the injury and the fact that injury induces inflammation of fully encapsulated, but quiescent, parasites of other but similar types, such as the echinococcus, and lastly, the evident pericapsular lymphoid accumulation, which he thinks establishes that the inflammatory phenomena which are present at the time are not necessarily related to the presence of living trichinæ.

110. **Aortic Aneurysm.**—Freeman concludes that with the present inefficiency of medical treatment and the comparative efficiency of the use of silver wire and electricity, it is probably better to resort to the use of the latter at once. The prospect of cure is, of course, in the early stages when the sac is firm and the patient in good condition. Soft unalloyed silver, devoid of spring, is preferable to hard elastic wire. It is hardly necessary to previously coil it. It is still an open question as to which is preferable, a large or small amount of wire, but theoretic advantages are in favor of the former. A strong electric current is apparently preferable to a weak one. The canula through which the wire is introduced should be inserted just within the sac and no further. There is little if any danger of bursting the aneurysm from increase of pressure due to coagulation in a portion of the sac only. Hall reports two cases in which Freeman employed this method.

117. **Lymphocytosis.**—After reporting a case, White concludes that lymphocytosis may result where there is an absence of enlarged lymph glands, from increased lymphoid tissue in the intestines and that the presence of these cells in the blood stream is probably due to mechanical causes (Ehrlich), and that lymphocytosis in the blood stream plays no part in the original inflammatory condition.

118. **Mastoid Suppuration.**—Phillips insists on early operation in mastoid diseases where a permanent remission of symptoms has not been brought about by free drainage through the drum membrane, by ice coils or poultices or by local blood-letting, and there should be no delay in operating under these conditions. The sooner it is done the better. Better hearing results will follow early operation as well as the chances of saving the patient's life. Pus pent up in mastoid cells is in a position to seriously menace vital structures. The method of operation adopted should meet one need, viz., the removal of all diseased tissue. He does not believe in the Wilde incision; local blood-letting can be obtained by much simpler methods. In cases of chronic suppuration the only hope of permanent relief is by external operation and we should certainly make an attempt to cure these cases.

124. **Blood Pressure.**—Carter's conclusions are that the average normal mean arterial pressure is for males 116 mm. Hg.; females, 113 mm. Hg. In acute nephritis the accompanying arterio-sclerosis, if present, is of slight or moderate degree. In acute nephritis the height of the blood-pressure varies, for the most part, directly with the amount of albumin in the urine. An acute parenchymatous nephritis complicating an acute infectious disease causes little or no increase in blood-pressure. The average mean arterial pressure in chronic nephritis is about 62 mm. Hg. higher than that of acute nephritis. There were no cases of chronic nephritis seen without an accompanying arterio-sclerosis. In arterio-sclerosis it is only those cases in which it is extreme that the average mean arterial pressure is raised. The most satisfactory drug for lowering blood-pressure, whether increase is due to nephritis or marked arterio-sclerosis, is sodium nitrite, best given in 2 to 3 grains every two to four hours. It acts in about twenty-six minutes, causing a reduction of 10 to 15 mm. Hg. (in marked arterio-sclerosis sometimes much more), the effect last-

ing one hour and forty-four minutes on the average. When the blood pressure is high and is accompanied by symptoms of uremia the best method of rapid reduction is phlebotomy, 5 to 8 ounces, followed by saline infusion (1400 to 1500 c.c. of hot normal salt solution) and sodium nitrite in full doses. Clinically, also, there is almost invariably improvement. Blood-pressure in aortic regurgitation, whether complicated by nephritis or not, is slow. If a mitral regurgitation is also present pressure may be nearly normal. Blood-pressure in all forms of anemia is below normal. Possible relation is suggested between lowered pressure in chlorosis and the production of gastric ulcer.

128. **The Identification of the Colon Bacillus.**—Rosenberger concludes that, while not affording a specific reaction in the case of the bacillus coli communis, neutral red agar should be classed as a valuable differentiating medium. The typhoid bacillus, while it does cause a fading of the color of the medium, never gives rise to the fluorescence noticed in some cultures of the bacillus communis. Further, the test medium should not be depended upon as the only differentiating one in examination of water, as several very common bacteria found in water give the same reaction.

129. **Abscess of the Liver.**—The points of interest in the case reported by Scott are the clinical latency with no history of previous dysentery, sudden rupture into the right pleural sac with signs of acute hemorrhagic pleurisy and development and appearance and disappearance of pyopneumothorax. The pathologic points of interest are: 1. The character of the pleural exudate: A thin brownish-red fluid, with a heavier brownish flocculent sediment, containing fatty leukocytic cells, looking like liver cells; bile pigment, fatty crystals, but no ameba, and sterile on culture. 2. The characteristic large single abscess in the right lobe, and its thick wall and viscid pus. 3. The very old lesion in the colon. 4. The curative powers of nature, which were well marked in this case, as seen in the extensive thickening of the pleura, obliteration of the diaphragm, and the two attempts to get rid of the pus through the diaphragm and rupture through the bronchi.

130. **Aneurysm of the Heart.**—The case reported by Curtin is considered of interest by him, 1, on account of the size of the cyst opening from the left ventricle which was as large as a child's head; 2, on account of the patient having lived for years not only with greatly diminished breathing capacity and severe complicating cardiac condition; and 3, the fact that the removal of 235 c.c. of blood, to accomplish which must have caused a break in the continuity of the aneurysmal walls, failed to produce any symptoms whatever.

138. **The Chinese in San Francisco.**—The President of the San Francisco Board of Health, Dr. Williamson, reports the difficulties which they have with the Chinese population, their absolute rejection of sanitary methods, their gregarious habits which make ten of them occupy the space where one could properly do so, their opium smoking, evasion of regulations, dirt, morals, etc. He says if we want relief let us have the continuance of the Exclusion Act; if we want a repetition of the labor troubles, more opium dens, prostitution, dirt, leprosy, tuberculosis, bubonic plague, then let us have the brotherhood of man in all the fulness thereof, as regards the Chinese.

139.—See abstract in THE JOURNAL, XXXVII, p. 1628.

Creosote in Pneumonia.—In the abstract of Dr. Van Zandt's article in our issue of December 28, the dose used by him is given as 7½ to 10 grains or minims every three hours to an adult. It should read carbonate of creosote, as the action of creosote itself would be altogether too irritating. The carbonate of creosote can be given in much larger doses than creosote without causing gastric irritation.

FOREIGN.

British Medical Journal, December 21.

Bacteriologic Examination of Potable Waters from the Public Health Point of View. A. C. HOUSTON.—The points mentioned as specially worthy of note in this article are: "1. That from the public health point of view knowledge is required, not so much as regards those microbes proper (peculiar, as it were) to pure water, but rather as regards those micro-organisms which are to be thought of as being of an adventitious, and possibly of a dangerous sort. 2. That as sewage is the most common and dangerous source of the pollution of potable water, further knowledge is required of the bacteria characteristic of sewage. 3. That bacteriologists have hitherto almost entirely neglected the question of the relative abundance of micro-organisms of different sort in pure and impure substances—for example, water as compared with sewage, virgin soils as compared with polluted and cultivated soils, etc. 4. That attention to this question of relative abundance has a most important bearing on the bacterioscopic analysis of potable waters from the public health point of view, because it shows that the biologic distinctions between pure and impure substances (for example, water and sewage) is so great as to be almost inconceivable, so great as to render the adoption of rigid and stringent bacteriologic standards unnecessary and inadvisable, and so great, also, as to allow the bacteriologist to detect in a water the presence of objectionable polluting material in quantity so small as to be far beyond the reach of chemical analysis. 5. That streptococci are absent from 10 c. cm. (or more); B. coli from 1, 10, it may be 100 c. cm. (or more); and B. enteritidis sporogenes from 100 to 500 c. cm. (or more) of pure waters; that is, these microbes are altogether absent or relatively so from pure waters. 6. That streptococci, B. coli and B. enteritidis sporogenes are commonly present in 1/1000 c. cm., 1/100,000 c. cm., and in 1/100 to 1/1000 c. cm., respectively, of crude sewage; that is, these microbes are present in crude sewage in great abundance. 7. That it is evident from these figures that there are tests available to the bacteriologist in the bacterioscopic examination of potable waters which far surpass in delicacy any known chemical tests. 8. That a stage may be reached in the pollution of water with sewage when the contaminating material is so small in relation to the bulk of water as to be inappreciable by chemical means, while yet yielding to bacteriologic tests unequivocal evidence of gross pollution with microbes of intestinal origin. This is a matter which has passed the stage of controversy. 9. That the presence of streptococci are to be thought of as indicating extremely recent, and B. coli less recent, but still not remote, pollution of animal sort, but that the presence of B. enteritidis sporogenes can not be considered to afford evidence of pollution bearing a necessary relation to the recent evacuation of animals. 10. That streptococci and B. coli are either altogether absent or present in sparse amount in virgin soils, and may be absent even from the polluted soils unless the contamination is of comparatively recent sort. In soils recently polluted with animal matters streptococci and B. coli are, of course, present in abundance. B. enteritidis sporogenes may be present even in seemingly virgin soils, but in sparse proportion compared with the large number found in cultivated and polluted soils. 11. That the presence of streptococci in any number in a water supply points not only to recent animal pollution, but also implies that the antecedent conditions—conditions intervening between the period of pollution of water and the time of collection of the sample—could hardly have been of so unfavorable a character as to destroy the vitality of seemingly more hardy microbes—for example, the typhoid bacillus. Quite the same can not be said for the B. coli test, since B. coli is a more hardy germ than B. typhosus. 12. That organic matter *per se* is, so far as we know, harmless; it is the bacteria apt to be associated with the organic matter that constitutes the element of danger. 13. That the amount of organic matter in a drop or even a few drops of sewage is so small as to be hardly appreciable on chemical analysis, and yet a like quantity of sewage can be shown by bacteriologic tests to harbor objectionable germs in great abundance. 14. That it is not necessary to demonstrate in a polluted water supply the presence of definitely pathogenic microbes to prove that there is danger in drinking such water. 15. That it is sufficient to show that microbes of intestinal origin are present in a water to condemn that water, because it is beyond controversy that

these micro-organisms are apt at any time to be accompanied by other bacteria which are clearly shown to cause disease in human beings. 16. That the bacteriologist can show that between a pure water and a water contaminated even with minute traces of excremental matter there exists a biologic difference not only of degree but of kind. 17. That under like conditions the chemist may fail to appreciate the pollution altogether, and most certainly can form no conception of its dangerous character. 18. That the chemist's methods of endeavoring to ascertain the truth in the analysis of water are necessarily indirect ones, and that all standards of potability are based on an assumed relationship which may or may not exist between the amount of organic matter and the number and character of associated bacteria. 19. That valuable as the chemical analysis of a water undoubtedly is, it ought in the future to occupy a secondary position, and the bacteriologic examination take its place in judging the purity or otherwise of our water supplies. 20. That until these facts are recognized and acted upon, progress in the prevention of water-borne disease must needs remain unsatisfactory."

On Rubella, Scarlatina and "Fourth Disease." P. WATSON WILLIAMS.—The author is dubious in regard to the existence of the alleged "fourth disease." He reports cases which he thinks are difficult to explain. He shows a group of scarlatinal cases exhibiting all the features that Dr. Dukes relies on as indicative of "fourth disease" and thinks that some of the cases hitherto reported as "fourth disease" were rubella, scarlatina, etc. Rubella occurs in different types as also do influenza and scarlatina, and he remarks that when it can be shown that the type of "fourth disease" protects the patient from rubella and yet occurs in those who have previously had scarlatina, the evidence of its being a distinct exanthem will certainly be very convincing, but hitherto such evidence is lacking.

Post-Scarlatinal Diphtheria and Rhinorrhea and Otorrhea. EGERTON H. WILLIAMS.—From a study of the hospital statistics of post-scarlatinal diphtherial nose and ear discharge, Williams offers the following as indicated from his study: 1. That it is advisable to cultivate all cases of rhinorrhea—aside from that of the acute stage—and otorrheas in scarlet fever cases, particularly in hospital practice. 2. That the bacilli at all resembling the diphtheria bacilli when found must be regarded as a modified variety of that organism, bearing in mind that their staining properties are often the only available means of diagnosis. 3. That systematic isolation of these rhinorrheas and otorrheas is not only justified but advisable. 4. That such isolation may be reasonably expected to reduce post-scarlatinal diphtheria incidence. 5. That it is an open question whether such mild cases require antitoxin treatment. Some cases, however, seem to indicate the use of the serum. It may do good and can do no harm. It is important also that these cases should be separated from healthy persons, even if they have not diphtherial disease. 6. That these discharges unassociated with sore throat, and therefore easily overlooked may be the cause of unaccountable outbreaks and the persistence of disease among school children.

Pneumococcus Arthritis with Notes of Seven Cases. NATHAN RAW.—Raw's conclusions are that from observation of a large number of cases of pneumonia he has found that the pneumococcus is capable of producing serious results in other parts of the body than the lungs. From his statistics he found that arthritis is a complication in 7 out of 817 cases of pneumonia or nearly 1 per cent., and his cases correspond almost exactly with those of Continental observers in that 6 were males and 1 female. In all 7 cases the pneumonia and the arthritis were both on the right side, which is probably only a coincidence though a striking one. He has also observed in some cases of pneumonia slight redness or pain of the shoulder joint of the affected side, but which subsided with the crisis. This may either precede the lung symptoms or follow the crisis or develop intercurrently. In Liverpool alcohol seems to decide in a great measure the severity of the attack, and he feels sure that one of his fatal cases would have recovered if he had not been a confirmed drunkard. The only treatment, in his opinion, is early evacuation of pus, if it can be reached. It is just possible that many cases of synovitis and arthritis occurring either during or after an attack of pneumonia or altogether independent may be due to this organism. He suggests that the name Fraenkel's diplococcus would be better than pneumococcus as its designation.

The Lancet, December 21.

Modern Methods of Vaccination and Their Scientific Basis. S. MONCKTON COPEMAN.—The history of vaccination in England is reviewed and the methods of government production of vaccine described. The author calls attention particularly to the method of vaccination by first blowing the lymph from a capillary tube on an aseptic prepared portion of the skin, and then scarifying through the droplets. It is well not to be too hasty to apply dressing, and he remarks that when every care has been taken to protect the area during the progress of the vaccination and prevent premature detachment of the crust the amount of scar remaining may be astonishingly slight. This he thinks is one of the results of the modern methods of vaccination, and shows how unnecessary old extensive scars are, which are due undoubtedly to mixed infection. Copeman reports also an interesting fact in regard to the production of vaccinia in the calf. Calves are found immune to vaccine taken directly from natural cases of human smallpox. He followed the suggestion occurring to him that the original vaccine Jenner used must have been obtained from inoculated smallpox. He utilized monkeys, which are very susceptible, and succeeded in obtaining virus which was immediately effective on the calf. He also remarks that a corroboration of this has recently come to his knowledge that the use of human inoculated smallpox in Burmah was also capable of originating effective strains of inoculated vaccine lymph.

Observations on the Etiology and Morbid Anatomy of Tuberculous Meningitis. EDMUND CAUTLEY.—The records of 27 cases of tuberculous meningitis observed during life and afterwards examined in the dead-house are analyzed by the author. He concludes that heredity means exposure to infection of weakly or predisposed children; that injury is very rarely an existing or predisposing cause; that the respiratory tract is the great channel of infection; that the alimentary tract is very rarely primarily infected; that cow's milk is very rarely if ever a source of infection; that limitation of the tubercular process to the meninges is very rare; that the prognosis is very hopeless on account of the extent of the tuberculous disease elsewhere; and that operative treatment may be discarded as experimental rather than useful. As evidence of the slight danger of ingested tubercle bacilli he calls attention to the fact that children almost invariably swallow their sputum and yet in tuberculous children intestinal involvement is exceptional.

Bulletin de l'Academie de Medecine (Paris), December 3.

The Respiratory Interchanges at High Altitudes. A. ROBIN.—The tests made on Dupasquier and others in the recent medical balloon ascensions at Paris are slightly contradictory in some points. Dupasquier found that his pulse became accelerated in an ascent lasting about three hours and attaining an altitude of 4250 meters, which is nearly 14,000 feet. The respiration increased in proportion to the altitude, but the breathing capacity and the respiratory quotient diminished inversely. The proportion of carbon dioxid decreased, while the proportion of oxygen increased during the entire ascent. The interchange of gases was promoted, especially the absorption of oxygen, which was triple the amount absorbed at the surface of the earth. The ventilation of the lungs increased with the altitude, but not in regular proportion. Tissot and Hallion also found that the oxygen absorbed increased from 3.52 and 3.6 c.c. to 6.16 and 6.46 in their tests, which are tabulated in the preceding issue of the *Bulletin*.

December 10.

Importance of Potatoes in Diabetes and Diabetic Complications. A. MOSSE.—The substitution of potatoes for bread in diabetes has proved a remarkably effective means of stimu-

lating the metabolism of sugar and thus attenuating the syndrome resulting from the diabetes. The general and local improvement has been so marked in Mossé's experience with 20 patients during the last five years that he thinks it must be ascribed to some special chemical combination in potatoes—probably the potassium salts. He found an average of 4.9 gm. of potassium to the kilogram of potato in his tests. He orders potatoes in an amount three times the amount of bread previously consumed. This supplies six times as much water, and three times as much mineral salts. It is in fact an "alkaline cure" like a course of Vichy waters. Under the influence of 500 to 3000 gm. of potato a day—generally about 1000 to 1500 gm.—the thirst rapidly and almost immediately diminished, also the glycosuria, while all the urologic symptoms were attenuated, coinciding with a general improvement. The neuralgic pains disappeared and rebellious sores and wounds in the diabetics rapidly healed. The potassium salts in the potato are in a vitalized form, and probably combine with the organic acids to form potassium carbonate. The improvement obtained on this potato diet was confirmed by a course at Vichy, in two instances. In the one case in which it failed, Vichy was also ineffectual. This patient was a woman of 47 with moderate arthritic diabetes, well tolerated, and existing for several years. In case of diabetic coma it might be possible to obtain good results from injections of an extract of potato chopped and squeezed in a bag.

Semaine Medicale (Paris), December 4.

Bladder Disturbances in Syringomyelia. J. ALBARRAN.—Only one of 6 patients with syringomyelia that happened to be inmates of the Bicêtre at about the same time recently, was free from bladder trouble. There was latent retention of urine in 3, one had cystitis with ulceration of the bladder walls, incomplete retention and secondary cord formation. Another presented total retention and a large ulceration in the bladder. Bladder troubles seem, therefore, to be frequent, contrary to the generally accepted opinion. They may be latent, merely an incomplete, aseptic retention, but this condition offers a very favorable soil for the development of infections. Trouble follows when the infection attains a certain intensity or when the retention is sufficiently pronounced to determine mechanical oppression. The lesions in the bladder differ anatomically from those of ordinary cystitis consecutive to retention. The ulceration is liable to lead to perforation and the process is evidently trophic, dependent upon a neuritic or medullary lesion. Trophic changes are frequent in syringomyelia, and it is not surprising that they should be encountered in the bladder. The ordinary lesions following aseptic or infected retention develop thus on a peculiar trophic soil. The contracting power of the bladder is liable to become impaired early. The ulceration may entail perforation and death, as in one of the cases described.

Modifications in the Respiration and Blood in the Medical Balloon Ascents.—Chauveau reported at the meeting of the Société de Biologie, November 30, that blood drawn from a dog at different times during the ascent to 3450 meters showed that the amount of carbon dioxid in the blood increased very much, but the increase in the amount of oxygen was but trifling, while the nitrogen was materially diminished. Jolly reported that tests on himself and Bonnier showed an increase in the red corpuscles of 12 per cent. The number increased from 4,760,000 on starting to 5,333,000 at 4450 meters and dropped to 4,800,000 at 2600 meters. The hemoglobin varied parallel with the number of corpuscles, attaining a proportion of 14 and 15.5 per cent. No modifications in the leucocytes were observed and no nucleated reds were discovered. Henry reported a similar increase in the reds in two dogs taken on the trip. The increase in the reds was much less marked in a third dog whose spleen had been removed a few weeks before. Bonnier noticed on the trip that his sense of hearing was diminished, but the transmission of sounds through the body was more rapid and more distinct than ever before.

Nouvelle Iconographie de la Salpetriere (Paris), xiv, 4.

Two Cases of Achondroplasia. R. CESTAN.—The want of normal cartilage development results in abnormally short bones from the early ossification of the cartilage. The muscles pile up on them until the limbs resemble the muscular development of the athlete. The fingers are spindle-shaped and spread apart at the tips like a trident. The subjects are frequently complete dwarfs. One of the cases described was a girl of 9. The photographs of 9 other cases that have been published are appended, with specimens of achondroplasia from museums and in art. Among them are the statuettes of the Egyptian gods Phthah and Bes, and the Roman emperor, Caracalla. Cestan attributes the condition to a toxic origin, and considers it a lesion extinct at birth. The achondroplasia occurs during the first months of fetal existence, before the thyroid gland has commenced its functions. Thyroid treatment, consequently, has no effect on it at any age.

Two Cases of Achondroplasia. E. APERT.—Both of the cases were male dwarfs. Apert emphasizes the hereditary character of achondroplasia, and calls attention to its occurrence in animals, especially in Ancona sheep, dachshund dogs, etc. He regards such types as a species apart; in man, at least a well characterized and hereditary type. It resembles in many respects the hereditary cleido-cranial dysostosis described by Marie. In fact the latter completes achondroplasia, as it affects the parts spared in the former. It is ossification from a membranous origin, while the other is from a cartilaginous origin.

Berliner Klin. Wochenschrift, November 25.

Aid to Diagnosis and Prognosis of Inflammation of Optic Nerve. J. HIRSCHBERG.—When one eye is covered, the pupil of the other eye becomes slightly dilated in normal conditions. This physiologic dilatation is about 1 mm. for a pupil diameter of 3 to 4 mm. In case of fresh inflammation of the optic nerve and consequent blindness, the pupil dilates to a remarkable extent when the sound eye is covered, and it does not contract when exposed to light. This pathologic dilatation is an infallible sign of the complete blindness of the eye. If it does not occur, the blindness may be assumed to be feigned or due to hysteria. In the first stage, the blindness occurs while the ophthalmoscope findings are negative. Then the findings become positive, and in the third stage, the blindness passes away, but it leaves a slight paleness. Hirschberg describes a case which passed through these three stages in one month. During the first two the pathologic dilatation was pronounced, but during the last stage the pupil contracted under the influence of light, thus showing that the blindness was subsiding and the prophecy of speedy recovery of sight was soon verified.

Early Diagnosis of Arthritis Coxae. J. A. BECKER.—The initial symptom of deforming arthritis of the hip joint is a difficulty in abduction. All the other movements of the thigh are normal, but abduction is painful. A hip splint should be applied at once with daily massage and movements. In a case described by Becker, this symptom was duly treated and cured, while the patient's brother was not treated until too late and a typical arthritis developed.

December 2.

Adrenal Diabetes. G. ZUELZER.—Blum's assertion that glycosuria appears in animals after injection of the extract of suprarenals, has been confirmed by Zuelzer's experimental research. As much as 4.4 per cent. of sugar was noted in one cat. The glycosuria, however, persists only 24 to 48 hours after the last injection. The proportion of sugar in the blood was also much increased. Further tests with alimentary glycosuria under these conditions showed a levulosuria of 0.9 and 0.5 per cent. in three animals after ingestion of 5 gm. of levulose. The glycosuria increased to 25 per cent. of the amount ingested after feeding with grape sugar. Lactosuria was also frequent after ingestion of milk sugar. The facts observed are chiefly interesting because the diabetes was induced by injection of what might be called a physiologic juice. [See editorial, December 28.]

Deutsche Med. Wochenschrift (Leipsic), November 21 and 28.

Medicine and Life at Sea. H. CURSCHMANN.—The subject

of tuberculosis among sailors was not mentioned at the recent London Antituberculosis Congress, Curschmann states, and yet the statistics of the Hamburg and Bremen hospitals show that 38 per cent. of all deaths among sailors is due to tuberculosis, and this does not include those who die at home or at sea. France reports 39 per cent. The proportion is practically the same in both the navy and the merchant marine. It is especially remarkable as the subjects are picked men in the prime of life. It illustrates the dangers of close contact between tuberculous and healthy men, and demonstrates that local relations and circumstances are capable of overcoming the most unfavorable general and personal conditions in unpredisposed individuals. The hygienic conditions on board ship for first and second-class passengers are admirable, and a sea voyage may be a favorable factor in the cure of tuberculosis, but the crowded quarters occupied by the crew, the lack of facilities for bathing, washing clothes, and disinfecting, invite contagion. Persons in advanced stages of tuberculosis should not be admitted on ships on account of the danger for the crew, especially as steerage passengers. The health of the engineers and stokers suffers from the heat and confined air, with consequent heart and kidney affections and arteriosclerosis. Nocht ascribes to this cause 16 per cent. of all deaths among sea-faring men. He found a temperature of 37.7 C. in 35 stokers with the room at 24 C., and 23 had a temperature of 38 and higher (100.5 F.). Lauenstein observed a temperature of 38 to 38.6 C. in seven previously normal men of this class. Yellow fever is the greatest scourge of sea-faring men. It is the cause of 24 per cent. of all deaths in the hospitals and probably has a total mortality of 42 per cent.

Parasitic Nature of Carcinoma. H. RIBBERT.—The only rôle played by parasites in the evolution of a carcinoma, according to Ribbert, is in the primary irritation and inflammation in the connective tissue. This inflammation separates the epithelium from its normal organic relations and renders it independent of the body, except for its nourishment, thus allowing full play to its inherent, independent faculty of proliferation. It is possible that a specific micro-organism may be the cause of the chronic primary inflammation in the connective tissue, but the subsequent proliferation is not parasitic.

Statistics of Hereditary Tuberculosis. F. F. FRIEDMANN.—In the 2984 cases of tuberculosis observed at the Berlin Charité between 1885 and 1901, hereditary antecedents were found in 983, that is, 33 per cent. of all cases; apparently negative in 751, that is, 25 per cent., and doubtful in 1250, that is, 41.8 per cent. Tuberculous brothers or sisters were mentioned in 35.6 per cent. of the 157 cases with both parents tuberculous; in 25 per cent. of the 503 cases with paternal inheritance; in 22.9 per cent. of the 323 cases with maternal inheritance; in 15.6 per cent. of the 1250 cases with dubious inheritance, and in 14 per cent. of the 751 cases with apparently negative tuberculous antecedents.

Dangers of Simultaneous Administration of Mercury and Iodids. F. LESSER.—Clinical and experimental tests with the salicylate, the thymol acetate of mercury, sublimate, and gray oil showed that they could be administered internally or applied locally while the organism was under the influence of potassium iodid, with impunity. No injurious results of any kind could be detected. But calomel applied locally or ingested, while the subject is under the influence of potassium iodid previously or simultaneously administered, forms with the iodin a caustic combination—the iodid of mercury—leading to abscess formation, ulceration, etc. No bacteria could be discovered in these ulcerations, which were exclusively of chemical origin. The iodin ingested in the form of potassium iodid is eliminated in the secretion on every mucous membrane, and when it comes in contact with calomel, the caustic compound that results is liable to form an ulceration, in the depths of which the yellow crystals of the mercury iodid are plainly visible. Rabbits treated with potassium iodid and then receiving a stomach injection of calomel, exhibited numerous ulcerations in the gastric mucosa, surrounded by a hyperemic zone showing the irritating action of the salt. The yellow crystals were found in the ulcerations and also in the stomach contents. These caustic ulcers are liable to occur in any stomach after ingestion of calomel when the system is under the influence of potassium iodid. The physician should ascertain whether the subject has been taking potassium iodid before prescribing calomel, either internally or for local application on any mucous membrane. Calomel is the best test for iodin in the organism. It discloses the presence of potassium iodid even in a 1 per 100,000 dilution. The simplest application of the test is to add a little calomel to the saliva. If it contains traces of iodin, the calomel turns yellow. As potassium iodid passes into the milk, calomel should not be prescribed for nurslings when the mother is or has been taking potassium iodid. Calomel, mercuric iodid and the biniodid all share this caustic property. The pain and distress caused by the ulcerations in the stomach in persons taking calomel after potassium iodid, have never been correctly interpreted. The pains and vomiting have been attributed to the gastro-intestinal affection for which the calomel was originally prescribed. Cases have been described of inexplicable pains, scab formation and suffocation after the local application of calomel.

Pregnancy After Nephrectomy. STEINHEIL.—Five years after one kidney had been extirpated on account of a tubercular affection, the patient, a woman of 25, apparently in good health, but rather pale, consulted Steinheil in regard to commencing pregnancy. She had been warned of the danger of conception in her case, and he hesitated whether to induce an abortion or to let the pregnancy take its course, deciding finally on the latter. The urine contained pus and was slightly blood stained. The pregnancy terminated normally and the patient recovered, with only the drawback that permanent catheterization was necessary for a short time. The child is healthy and the mother remained in good health for twenty-one months, when she succumbed to the extension of the tuberculous process. Whether she would have survived longer if the pregnancy had been interrupted is an open question. Steinheil states that he never felt such a burden of responsibility on his shoulders as when he had to decide in this case.

Die Heilkunde (Vienna), v, 4.

Therapeutic Attempts to Promote Natural Processes in Tuberculosis. A. HOFF.—The advantages of cinnamic acid and of alcohol are combined by Hoff, who treats pulmonary tuberculosis by the internal and external application of alcohol supplemented by an alcoholic solution of arsenic and cinnamic acid. His formula is arsenic acid, 0.1; potassium carbonate, 0.2; cinnamic acid, 0.3—boiled with distilled water to make 5 c.c. Aqueous extract of opium is then added in the amount of 0.3; brandy, 2.5; and distilled water, 2.5. Six drops are to be taken in a spoonful of water after dinner and supper, gradually increasing the dose to twenty-two drops twice a day. The JOURNAL has frequently referred to the benefits obtained from cinnamic acid as reported by Landerer and others in the treatment of tuberculosis. Kraemer's recent statistics show that objective success was attained in 72.8 per cent. after 14 injections; in 79.7 per cent. after 20 injections; in 80.7 per cent. after 24 injections, and in 86.1 per cent. after 40 injections. Patients treated for six months and more were completely cured in many cases, and the cures have persisted for more than three years. The local alcohol compresses were applied according to Buchner's directions. In cases of rapidly progressive emaciation and high fever, Hoff orders "Peru cognac" at first and follows later with his drop mixture, which is merely a more concentrated form of the "Peru cognac." He describes a number of typical cases to prove his assertion that this method of treating pulmonary consumption is the most rational, and all in all, the best. He has had several years' experience with it, and has applied it in numerous cases both in private and dispensary practice.

Muenchener Med. Wochenschrift, November 26 and December 3

Aid to Diagnosis of Appendicitis. H. CURSCHMANN.—For the last two and one-half years, Curschmann has had the blood examined daily in every doubtful case of inflammatory

rocesses in the cecum or appendix, 60 in all. He found that was possible by counting the leucocytes to differentiate every ase of appendicitis with merely a so-called fibrinous exudate, rom those entailing abscess-formation, even when all other igns, such as fluctuation, shape, consistency, temperature and xploratory puncture were the same in each. The cases without an abscess were distinguished by the fact that they ran heir course without any increase in the number of the white orpuscles, or with merely a slight increase at first, returning ermanently to normal, or with an isolated increase in a few ays. Marked increase in the number of whites occurs in the bsence of an abscess, only at the commencement of the inflamatory process, and then only transiently. The number never ises above 20,000 or 22,000 in this case. If the number of eucocytes is very high in the first days or in the further ourse of the inflammation and remains high, if there is no ther process to which the leucocytosis can be attributed, such s pneumonia, etc., the formation of an abscess can be positively ssumed and surgical intervention be unconditionally deterined on. Leucocytes to the number of 25,000 and more, even f observed only once, are a very suspicious sign. If noted permanently as the process continues, the diagnosis of suppuraion is certain, and further hesitation is unnecessary. When he abscess has been evacuated, the leucocytes drop rapidly to he normal proportion. If the number does not decrease or if it ncreases again, retention of pus or an abscess elsewhere can be onfidently assumed. If the abscess perforates into the intesine or bladder and is thus evacuated, the leucocytes diminish s after a surgical evacuation. The number falls rapidly if he pus finds free outlet, more slowly if it meets with hindrance. The behavior of the leucocytes is a much more reliable index f the internal process than the temperature. Curschmann abulates the findings in a number of typical cases, showing he constant behavior of the leucocytes while the temperature nd other physical signs were frequently contradictory.

Ovarian Treatment After Castration. A. FLOCKEMANN.—Ovarian medication has proved perfectly harmless in Flockemann's experience, and has been successful in warding off unpleasant symptoms after bilateral castration in a number of patients. It is not invariably effective, but the proportion of successes is so large that it ought always to be given a trial in such cases.

Sammlung Klin. Vortraege, No. 318.

Chronic Dyspeptic Diarrhea and Its Treatment. R. SCHUETZ.—In 16 cases of chronic diarrhea persisting for years, Schuetz obtained a rapid cure in less than a week, by washing out the stomach and intestines and restricting the diet to articles made of fine flour, with six eggs a day, preparations of albumin, beef tea, and, in the milder cases, white meat. Red meat, milk and vegetables were barred. He believes that these cases of chronic, rebellious diarrhea are primarily due to gastric disturbances. The impaired stomach digestion is compensated at first by the small intestine. The intestinal digestion gradually becomes impaired, with resulting diarrhea, and finally, intestinal catarrh. Two-thirds of the patients had experienced flatulency and colic at times, with vague symptoms in the abdomen, but no distinct history of stomach trouble. A chronic gastric affection was evident in 2 patients and neurasthenia in a few others. One young girl developed later tetany and scorbutus. Nine were dispensary patients. The feces had an acid odor and were full of minute bubbles. The food frequently passed undigested. In the 14 cases in which the stomach was systematically washed out, gastric achylia was found but once. The total acidity averaged high, as much as 132 to 178. Most of the cases exhibited merely a diminished secretion of hydrochloric acid, with or without atony. The motor function was excessive in one case. Drugs to check the diarrhea are absolutely contra-indicated. The patients should remain in bed during treatment or lie down for five or six hours a day. An important adjuvant is hot Wiesbaden Kochbrunnen water before meals, and after meals a little dilute hydrochloric acid or natural gastric juice from dogs.

Wiener Klin. Wochenschrift, November 21.

Diagnostic Significance of Fluctuation in Pleuritic Effusions. R. VON STENITZER.—Fluctuation occurs in pleuritic effusions much more frequently than is usually credited. The waves are shorter than in case of ascites. By bending the trunk and raising the arm, the ribs can be spread apart. In case of an effusion on the right side the assistant stands at the left of the bed and places his hand flat with slight pressure on the back of the thorax, with the middle finger in the interspace selected for the percussion, preferably between the spine and the line of the scapula, and presses firmly with the middle finger, while the physician taps as for ordinary percussion, preferably in the seventh and eighth interspaces and region of the posterior axillary line. The discovery of fluctuation is valuable for the differentiation, especially in case of a moderate effusion. In one case with signs of a serous pleuritis in a tuberculous patient and fluctuation in the seventh to ninth interspaces, friction sounds became audible later, both during inspiration and expiration, and also in the fifth interspace. The presence of fluctuation differentiated the friction sounds as not due to the rubbing together of the sheets of the pleura, nor to deposits on the costal pleura, but to floating fibers of fibrin in the serous effusion, a kind of villous pleuritis. The lack of the pectoral fremitus and of change in tone with position renders the diagnosis of a pleural effusion particularly difficult in children. When the fingers are pressed into one interspace and the hypochondrium is compressed from below, the discovery of fluctuation aids materially in the differentiation.

Meniere's Symptom Complex Cured by Electricity. J. DONATH.—In case of Menière's symptom-complex, before administering quinin, Donath advises the application of galvanic electricity with which he cured in one sitting a severe and rebellious case. Others have also had similarly favorable results.

November 28.

Mesenteric Cysts. V. BLUM.—In the case of cyst formation in the mesentery, described in this communication, recurring volvulus of the small intestine was noted, and Blum calls attention to this feature of the case as valuable for the diagnosis of these conditions. The patient was a girl, 6 years old. Five or six times in the course of a year she had suffered from violent pains accompanying constipation, but in the intervals presented no symptoms. The indications of volvulus disappeared four times after copious irrigation of the intestines, but at last presented the clinical picture of chronic invagination of the small intestine. A cyst the size of a fist was found in the mesentery, twisted several times on its axis, and the entire ileum was in a tangle around it. The child died a few hours after the operation and tubercular lesions were found throughout the mesentery and in one lung. Recurring attacks of intestinal occlusion in case of a soft, fluctuating, movable tumor near the umbilicus should suggest the possibility of a mesenteric cyst. The origin is probably tubercular or typhoid degeneration of some intestinal gland.

Simple Fastening for Permanent Catheter. L. MOSZKOWICZ.—A rubber tube about 12 cm. long is slit into four strips to within 3 cm. of the end. The tube should be just large enough to admit the catheter with friction. The ends of the four strips are fastened over another rubber tube. The catheter is passed through the unslit portion of the tube, doubled back inside the slit ends fastened to the second tube which serves for a strap. It is fastened around the glans or waist. This muzzle arrangement holds the catheter permanently in place and with slight modifications is also applicable to females.

Grece Medicale (Syra, Greece), September.

Treatment of Pott's Disease by Gradual Reduction Without Chloroform. N. ALIVIZATOS.—This method of treatment is adapted only for humps without ankylosis. The child reclines on supports at the knees and shoulders. A simple apparatus on a standard beside him accomplishes the

reduction by a gradual, slow, gentle, elastic pressure on the hump, while ropes from the same controlling wheel pass over a pulley at each end of the table, on the plane in which the child is lying, and exert extension and counterextension, at the same time, all from the same simple apparatus. The plaster cast is applied while the child is still in extension, without altering his position. There is no pain, and chloroform or any anesthesia is unnecessary. The hump should be radiographed as the first step, to determine the exact character of the lesion and to exclude those with ankylosis.

October.

A Voice from Damascus on the Subject of Tuberculosis. J. MARENGOS.—The Bedouin encampments with their pure air, sunshine, simple manner of living and enviable health, are true sanatoriums, Marengos exclaims. Phthisis is unknown. He asserts that man has become tuberculizable since he neglected the development of his body, which the ancients regarded as an actual religion. According to the law of compensation, the benefits of civilization entail phthisis, the tent life of the Bedouins brings health. Tuberculosis was almost unknown in Damascus twenty years ago, but is growing more frequent every day. Malaria is declining. The 15,000 Jews in Damascus seem to be exempt from tuberculosis. Marengos recently discovered a young consumptive in a remote village far from all apparent sources of contagion, no other case known in the community.

Treatment of Hydrocele. P. DIVARIS.—The fluid of the hydrocele will be absorbed if the absorbing power of the endothelium is rearoused. Divaris accepts this as the principle of his treatment, which consists in the evacuation of half of the fluid after an injection of cocain. He then injects four grams of 90 per cent. alcohol. This stimulates the endothelium and causes the absorption of the fluid, thus curing without pain.

Zeitschrift f. Diaet. u. Phys. Therapie (Leipsic), v, 4 to 6.

Solid Food for Typhoid Patients. A. DVORETZKY.—THE JOURNAL has referred to the success obtained by the Russians in feeding solid food to typhoid fever patients. They claim that it is a mistake to assume that the digestive powers are diminished during a fever. Also, that the fear of perforation from solid food is unfounded, as by the time it reaches the portion of the intestines affected by the typhoid process it is no longer in a solid form. The danger of adding to the fever by a mixed diet is exaggerated, they state. If the temperature does rise a trifle, this drawback is far outbalanced by the benefits to the general health. The debility and symptoms during convalescence attributed to the typhoid toxins, are in reality merely the results of starvation from the usual fluid diet. None of the physicians who report their experience with non-fluid foods has lost a patient. All were comparatively strong and lively when the fever left them and could be dismissed much sooner than the control patients. Ladyshensky reports five cases fed throughout with eggs, poultry and chops, and in the later stages with fish, potatoes, etc. Tiemen reports 32 typhoid patients kept on a mixed diet. No complications were observed in any case. The abdomen was always soft and free from meteorism.

Blood Pressure in Phthisics. M. JOHN.—About 120 patients with pulmonary tuberculosis were examined and the blood pressure and specific gravity of the blood were found normal in the early stages of the affection. As the tubercular process gained the upper hand, both decreased, before auscultation or percussion indicated the change. Both blood pressure and density are slightly above normal in case of emphysema.

Zeitschrift f. Geb. u. Gyn. (Stuttgart), xlvi, 1.

Influence of Pregnancy on Cancer of the Uterus. K. HENSE.—Pregnancy or the menopause has undoubtedly an unfavorable influence on the development of malignant disease, but it is less deadly than some imagine. Hense has found 10 cases of survival for more than five years in 82 patients operated on for uterine cancer more than five years ago, during or immediately after a pregnancy. Vaginal hysterectomy was done twenty-five times, with 9 permanent cures. French surgeons consider a pregnant woman with cancer as irremediably lost, and sacrifice the mother in favor of the child. In Germany the surgeon operates at once, and without regard to the child. Hense has collected 122 cases of this kind. The cervix was the site of the lesion in all. Fraenkel found that 30 per cent. survived for more than five years without recurrence in 230 cases of cancer of the cervix not associated with pregnancy.

Zeitschrift f. Heilkunde, xxii, 8 and 9.

Therapeutic Value of Venesection in Uremia. K. WALKO.—A dozen typical examples are reported to demonstrate the remarkable benefits to be derived from venesection and transfusion of saline solution in certain cases of uremia. The uremic symptoms subsided while quantities of blood-stained urine, rich in sediment, were voided, accompanied in some cases by profuse sweating and diminished albuminuria. These favorable results were obtained exclusively in cases of uremia with acute nephritis, or in acute exacerbations of mild, subacute nephritis. Venesection was nearly or completely ineffectual in cases of uremia with severe chronic nephritis or contracted kidney, amyloid degeneration or large white kidney. Tests of the blood before and after the uremic attacks failed to disclose any difference in the molecular concentration. The benefit of the venesection is probably due to its arresting the vascular constriction resulting from the uremic irritation of the vasomotor centers. Venesection is, therefore, indicated in all cases of acute nephritis in which diminished secretion of urine is accompanied by edema and high vascular tension. It may prevent its transition into a chronic form. Repeated hot baths are not indicated in the treatment of nephritis with uremia except when copious diuresis follows. Otherwise the loss of water from the tissues, combined with the retention of waste products, may entail severe uremic symptoms and even death, as in a case at von Jaksch's clinic whence this communication proceeds. Infusion of salt solution is a valuable adjuvant to venesection sometimes, when the edema is not too extensive.

Glycosuria and Acetonuria in Case of Phosphorus Intoxication. K. WALKO.—Alimentary glycosuria was observed in 65.85 per cent. of 141 cases of acute phosphorus intoxication. The mortality was 30.4 per cent. In 6 cases there was spontaneous glycosuria. The liver suffers most in phosphorus poisoning, and the facts observed in these cases confirm the close connection between fatty degeneration of the liver and glycosuria. The alimentary glycosuria paralleled the severity of the intoxication, but afforded no data for the prognosis. Acetonuria was frequently observed in the first few days of the intoxication, but no connection could be discovered between it and the severity of the case or the alimentary glycosuria.

Inferior Peritoneal Adhesions. J. ALTENEDER.—Gersuny has now an experience of forty-two operations undertaken to relieve disturbances due to the formation of adhesions in the abdomen. Thirty-five cases were correctly diagnosed from the character of the pains, due to the special function or movements of the organs involved. Pain before and during micturition indicates adhesions involving the bladder. Gersuny's typical flexure adhesions cause pain just before defecation, and adhesions between the internal female genitalia are liable to induce displacements, with all their consequences, which include a liability to ectopic pregnancy as well as painful menstruation. Certain adhesions between the intestines and mesosigma entail constipation and a tendency to volvulus which can be cured by high rectal injections. Gersuny believes that chronic catarrhal inflammation of the appendix may result from the irritation caused by adhesions. The particulars of all his cases are tabulated; 12 were cured and 18 improved out of 33 followed to date. Failure to find all the adhesions or the formation of new adhesions was probably the cause of the non-success in the others.

Zeitschrift f. Klin. Med. (Berlin), xliv, 1 and 2.

Varieties of Tumors in the Kidneys. D. VON HANSE-

MANN.—There is scarcely any other organ in the body in which tumors occur so frequently and in so many varieties as in the kidney. Hansemann supports this statement by reviewing the kinds of tumors that have been recorded, and divides them into four groups: 1. Tumors developing in the parenchyma, such as cystoma, adenoma or carcinoma. 2. Tumors in the stroma, fibroma or sarcoma, or they may develop from the connective tissue or from the vessels, forming hemangioma, lymphangioma, endothelial adenoma. 3. Tumors from embryonal aberration of cells. They may be of a single kind of tissue, such as hypernephroma, lipoma or chondroma, or they may be a mixture, as in teratoma, with or without malignant transformation. 4. Pseudo-tumors, such as cyst, echinococcus, hydronephrosis, etc.

Influence of Cancer on Stomach Secretions. O. REISSNER.—After extensive study of the chemistry of the stomach in cases of cancer, Reissner is convinced that the neoplasm has no influence until it becomes ulcerated. At this stage the poisonous products of the cancer become mixed with the stomach contents and the results are extremely injurious for both the stomach and the intestines. The absence of free hydrochloric acid in such conditions is due in part to its combination and partially to the inhibition of the secretion by the poisons in the stomach contents. This assumption explains the rapid atrophy of the mucosa and the absence of uncombined acid in case of cancer of the stomach, irrespective of its site and even when it is located in an adjacent organ. The secretion is not entirely checked, but the acid is neutralized. It also explains why the free hydrochloric acid shows less variation in case of a cancer developing on the foundation of an ulcer. Cicatricial tissue has less tendency to ulceration, and the cancer develops inward rather than outward. It also explains the rapid, often sudden, disappearance of the free hydrochloric acid, and its reappearance after the ablation of the tumor, in case the atrophy has not progressed too far. The practical results of the research reported are the warning to shut off the cancer from the rest of the stomach, in case it can not be entirely removed, in order to prevent the mixing of its products with the stomach contents.

Pathologic Anatomy of the Stomach in Case of Ulcus or Carcinoma. W. A. BOEKELMANN.—Scraps of the mucous lining of the stomach, obtained during a gastro-enterostomy, from 44 patients, showed nearly normal conditions in the cases of ulcus or cicatrices, even when the lesion had lasted for eleven to seventeen years. He found in 31 out of 53 cases that an increased production of hydrochloric acid coincided with an accumulation of cells covering the lesion, or with carcinoma developing on the foundation of an ulcus. In his experience, this latter variety occurred once to 3.9 primary cancers. The duration of the latter averaged five weeks to two years in his 26 cases, while the patients with post-ulcus cancers survived several years; ten and fifteen years in 2 cases. These 2 patients had 2.1 or 2 per 1000 acid while the highest proportion in the primary cases was 0.8 per cent. He emphasizes the good condition of the stomach lining in all the post-ulcus cases, and the excessive atrophy with an ulcerating cancer, either in the stomach or duodenum. He attempts to explain these phenomena by assuming that the post-ulcus cancer is rather a local process while the primary is more a general, constitutional affection. This assumption may be verified or overthrown, perhaps, by study of recoveries after extirpation of both kinds of malignant tumors.

Janus (Amsterdam), November.

Discovery of Collodion. G. W. A. KAHLBAUM.—The encyclopedias mention Maynard as the discoverer of collodion, but Kahlbaum claims the priority for the German scientist Schoenbein. He published in December, 1846, the first description of the substance with its characteristic properties and its advantages for the treatment of wounds. C. T. Jackson in America, "the father of anesthesia," published January 6, 1847, that he had found a means to dissolve cellulose nitrate, and with his friends, Bigelow and Maynard, suggested its application to the treatment of wounds. It was known in America as Maynard's adhesive solution for many years. Schoenbein called it xyloidin. The term collodion was first applied to it by A. A. Gould, secretary of the Boston Society of Natural History. Letters which Kahlbaum has found, dated at Geneva, Switzerland, February, 1847, mention that Schoenbein's new method of treating wounds was the sensation of the day, and in March, Jung published the reports of a number of cases treated with it. Communication between Europe and America in those days excludes the possibility that the scientists in either country could have heard of the discoveries across the water in such a short time.

Cronica Med. Mexicana (Mexico), December 1.

Efficacy of Calcium Monosulphid in Diphtheria. E. L. ABOGADO.—Experiences in Mexico are confirming the efficacy of the treatment of diphtheria with calcium monosulphid recommended by R. Tissot of Switzerland. It cures mild cases without further medication, and in severe cases proves a most valuable adjuvant to antitoxin treatment. He established its efficacy in 110 cases of associated diphtheria, in 21 of mild, pure diphtheria and in 13 severe, pure cases. None of the two last groups died. The monosulphid was the only therapeutic agent employed in any of the cases. Its efficacy is probably due to its action on the associated microbes as well as on the diphtheria germs, while antitoxin is powerless against the former. He usually administers 1 cg. every hour up to 1 year of age; 1 cg. every half-hour between 1 and 3; one every fifteen minutes between 3 and 5 or 30 during the day. Between 5 and 15, one or two every fifteen minutes or 49 during the day. Adults should take 60 during the twenty-four hours, suspending the medication whenever the breath exhales the characteristic odor very intensely. He administers 5 or 6 cg. a day as a preventive measure to children exposed to contagion. He considers it a very valuable internal antiseptic and has never known of any untoward effects from its use in this way during six years of experience.

Klinitchesky Journal (Moscow), October.

Tubercular Peritonitis. P. E. ELESTRATOV.—The statistics of a number of writers on this subject show that 31.6 per cent. of 136 cases recovered with medical treatment alone, while 78.3 per cent. of 240 cases recovered after surgical intervention. On the ground of his personal observation and the reports published by others, Elestratov asserts that the variety of tubercular peritonitis which runs an almost stationary or chronic course, with moderate temperature and not much ascites, without much interference with nourishment, is capable of retrogressing to permanent recovery provided no other organs are affected by the tuberculosis. On the other hand, when the existence of tubercular foci can be established, serving as the starting-point for infection of the mesenteric glands, intestines or uterine appendages, surgical intervention is urgently indicated.

Vratch (St. Petersburg), xxii, 1901, 34.

Combined Ethyl Bromid and Chloroform Anesthesia. E. F. ZEMATZKY.—A few drops of ethyl bromid on the mask put the patient to sleep so rapidly that he has no time to realize tne process. Zematzky then substitutes chloroform for the bromid and states that this combination has all the advantages and none of the disadvantages of other methods. In less than a minute, usually forty-five to fifty-five seconds, the minimum twenty seconds and the maximum two minutes, the patient has passed successively through the phases of analgesia and anesthesia to loss of consciousness, with entire absence of excitement. No accidents of any kind were observed in Zematzky's experience with more than 2000 subjects thus anesthetized or in 1000 others where he was a spectator.

Medical Use of Hypnotism. P. ROSENBACH.—Many nervous and mental affections against which the physician is otherwise powerless, can be effectively treated by hypnotism, which does not receive from physicians the consideration that it deserves. Rosenbach urges the profession to resort to it more

frequently in cases of cephalalgia, local spasms, morbid fixed ideas, phobias, insomnia, alcoholism, psychic impotence, enuresis, and other conditions resulting from neurasthenia, hysteria, etc. He appeals for relief from the regulations in Russia according to which no physician can hypnotize a patient except in the presence of other physicians and after due notification of the local medical authorities, stating not only the patient's name and the purpose for which the hypnotism is to be applied, but also the names of the witnesses.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

TEXT-BOOK OF HISTOLOGY. Including the Microscopic Technic. By Dr. Philipp Stohr, Professor of Anatomy at the University of Würzburg. Fourth American, Based upon the Ninth German Edition. Translated by Dr. Emma L. Billstein, formerly Director of the Laboratories of Histology and Embryology, Woman's Medical College of Pennsylvania. Edited, with additions, by Dr. Alfred Schaper, Professor of Anatomy, University of Breslau. Cloth. Octavo, 500 pages. Price, $3.00 net. Philadelphia: P. Blakiston's Son & Co. 1901.

THE PRACTICAL SERIES OF YEAR-BOOKS, Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued Monthly. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume II. General Surgery, Edited by John B. Murphy, M.D., Professor of Surgery, Northwestern University Medical School. November, 1901. Cloth. Pp. 515. Price, $2.00. Chicago: The Year-Book Publishers. 1901.

NEUROLOGICAL TECHNIQUE. Some Special Histological Methods Employed for the Study of the Nervous System, Together with a Laboratory Outline for the Dissection of the Central Nervous System and the Neurological Nomenclature (BNA) Arranged in a Classified List. By Irving Hardesty, Ph.D., Instructor in Anatomy, University of California. Cloth. Pp. 183. Price, $1.75 net. Chicago: The University of Chicago Press. 1902.

THE MENTAL FUNCTIONS OF THE BRAIN, An Investigation into Their Localization and Their Manifestation in Health and Disease. By Bernard Hollander, M.D. (Freiburg I.B.), M.R.C.S., L.R.C.P. (London). Illustrated with the Clinical Records of 800 Cases of Localized Brain Derangements and with Several Plates. Cloth. Pp. 507. Price, $3.50. New York and London: G. P. Putnam's Son. 1901.

AN EXPERIMENTAL AND CLINICAL RESEARCH INTO CERTAIN PROBLEMS RELATING TO SURGICAL OPERATIONS. An Essay Awarded the Alvarenga Prize for 1901, by the College of Physicians of Philadelphia. By George W. Crile, A.M., M.D., Ph.D., Professor of Clinical Surgery, Medical Department, Western Reserve University. Cloth. Pp. 200. Price, $2.50. Philadelphia: J. B. Lippincott Co. 1901.

CLINICAL HEMATOLOGY. A Practical Guide to the Examination of the Blood with Reference to Diagnosis. By John C. DaCosta, Jr., M.D., Assistant Demonstrator of Clinical Medicine, Jefferson Medical College. Containing 8 full-page Colored Plates, 3 Charts, and 48 Other Illustrations. Cloth. Octavo, 450 pages. Price, $5.00 net. Philadelphia: P. Blakiston's Son & Co. 1901.

THIRTY-SECOND ANNUAL REPORT OF THE MANAGERS AND SUPERINTENDENT OF THE NEW YORK STATE SCHOOL FOR THE BLIND, Batavia, N. Y., For the Year 1899-1900. Paper. Pp. 45. Albany: James B. Lyon. 1901.

TRANSACTIONS OF THE LOUISIANA STATE MEDICAL SOCIETY, at Its 22d Annual Session, held at New Orleans, La., April 18, 19, 20, 1901. Cloth. Pp. 467.

The Public Service.

Army Changes.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., Dec. 19 to 25, 1901, inclusive:

Charles Anderson, captain, asst.-surgeon, Vols., honorably discharged from the service of the United States, to take effect Feb. 10, 1902.

David Baker, lieutenant, asst.-surgeon, U. S. A., relieved from duty in the Department of California and assigned to Fort McPherson, Ga.

Peter C. Field, lieutenant, asst.-surgeon, U. S. A., former orders directing him to proceed from Fort Slocum, N. Y., to Fort Robinson, Neb., revoked.

William C. Gorgas, major and surgeon, U. S. A., detailed by the Secretary of War to represent the Medical Department of the Army at the meeting of the Pan-American Sanitary Congress, to be held in the city of Havana, Cuba, Feb. 15, 1902.

George C. Grabenstatter, contract surgeon, from Buffalo, N. Y., to San Francisco, Cal., en route for duty in the Division of the Philippines.

Vernon J. Hooper, captain, asst.-surgeon, Vols., having tendered his resignation, is honorably discharged from the service of the United States, to take effect Dec. 31, 1901.

Henry M. Hull, contract surgeon, leave of absence for ten days granted.

Jefferson R. Kean, major and surgeon, U. S. A., detailed to represent the Medical Department of the Army at the Pan-American Sanitary Congress, to be held in the city of Havana, Cuba, Feb. 15, 1902.

Elias H. Porter, contract surgeon, leave of absence for two months granted.

Albert H. Simonton, contract surgeon, former orders directing him to proceed from Fort Robinson, Neb., to Birmingham, Ala., for annulment of contract, revoked.

Blair D. Taylor, major and surgeon, U. S. A., leave of absence for one month granted.

James W. Van Dusen, lieutenant and asst.-surgeon, U. S. A., now at San Francisco, Cal., to proceed to Columbus Barracks, Ohio, for post duty, December 19; leave of absence for one month granted.

Hugo A. Wall, contract surgeon, now at San Francisco, Cal., is relieved from duty in the Division of the Philippines, and assigned to post duty at Fort Strong, Mass.

APPOINTMENTS, PROMOTIONS, CASUALTIES, ETC.

Regular Army, Appointments.—James L. Bevans, of Illinois, to be asst.-surgeon, with the rank of first lieutenant.

Retired for Disability Incident to the Service.—Major Eugene L. Swift, surgeon, Dec. 9, 1901, under acts of Oct. 1, 1890, and Feb. 2, 1901.

Volunteers, Honorably Discharged.—Major Thomas U. Raymond, surgeon, Dec. 31, 1901; Captain Walter C. Chidester, asst.-surgeon, Nov. 11, 1901; Captain Robert A. Anderson, asst.-surgeon, Nov. 16, 1901; Captain James H. McCall, asst.-surgeon, Dec. 31, 1901.

Died.—Captain John C. Orr, asst.-surgeon, Sept. 12, 1901.

Navy Changes.

Changes in the Medical Corps of the Navy, for week ending Dec. 28, 1901:

P. A. Surgeon R. T. Orvis, ordered to the *Michigan* as the relief of P. A. Surgeon W. B. Grove.

P. A. Surgeon W. B. Grove, detached from the *Michigan* and ordered home to wait orders.

Pharmacist J. Cowan, ordered to the Boston Navy Yard.

Surgeon G. Rothganger, detached from the Naval Hospital, New York, and ordered to the *San Francisco*, January 2.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, U. S. Marine-Hospital Service, during the week ended Dec. 27, 1901:

SMALLPOX—UNITED STATES.

California: San Francisco, Dec. 8-15, 1 case.
Illinois: Chicago, Dec. 14-21, 2 cases.
Indiana: Evansville, Dec. 14-21, 4 cases.
Iowa: Clinton, Dec. 14-21, 2 cases.
Louisiana: Dec. 14-21, New Orleans, 1 case; Shreveport, 5 cases.
Massachusetts: Boston, Dec. 14-21, 41 cases, 12 deaths; Cambridge, Dec. 14-21, 3 cases; Gloucester, Dec. 14-21, 2 cases; Lowell, Dec. 14-21, 6 cases; Malden, Dec. 14-21, 3 cases, 1 death; Somerville, Dec. 13-20, 1 case.
Michigan: Grand Rapids, Dec. 14-21, 1 case.
Minnesota: Minneapolis, Dec. 7-14, 7 cases.
Nebraska: Omaha, Dec. 14-21, 13 cases.
New Hampshire: Nashua, Dec. 14-21, 1 case.
New Jersey: Dec. 14-21, Camden, 15 cases; Newark, 24 cases, 12 deaths.
New York: New York, Dec. 14-21, 12 cases, 1 death.
Ohio: Ashtabula, Dec. 14-21, 1 case; Cincinnati, Dec. 13-20, 11 cases; Cleveland, Dec. 14-21, 1 case; Massillon, Dec. 7-14, 1 case.
Pennsylvania: Lebanon, Dec. 14-21, 7 cases; Philadelphia, Dec. 14-21, 76 cases, 10 deaths.
South Carolina: Greenville, Dec. 7-14, 2 cases.
Tennessee: Memphis, Dec. 14-21, 2 cases.
Utah: Salt Lake City, Dec. 14-21, 2 cases.
Vermont: Burlington, Sept. 28-Dec. 21, 55 cases.
Wisconsin: Green Bay, Dec. 15-22, 7 cases; Milwaukee, Dec. 14-21, 1 case.

SMALLPOX—FOREIGN.

Austria: Prague, Nov. 23-Dec. 7, 7 cases.
Belgium: Antwerp, Nov. 23-30, 3 cases; Ghent, Nov. 30-Dec. 7, 3 deaths.
Canada: Halifax, Dec. 7-21, 21 cases; St. John, Dec. 7-21, 11 cases, 2 deaths; Windsor, Dec. 14-21, 1 case; Winnipeg, Dec. 7-14, 4 cases.
Colombia: Cartagena, Nov. 23-30, 2 deaths; Panama, Dec. 9-16, 25 cases.
France: Paris, Nov. 30-Dec. 7, 1 case.
Great Britain: Glasgow, Dec. 6-13, 4 deaths; Liverpool, Nov. 3-Dec. 7, 5 cases; London, Nov. 30-Dec. 7, 474 cases, 20 deaths.
India: Calcutta, Nov. 16-23, 3 deaths; Madras, Nov. 15-22, 2 deaths.
Italy: Naples, Nov. 23-30, 18 cases, 1 death.
Russia: Moscow, Nov. 16-30, 23 cases, 9 deaths; Odessa, Nov. 23-Dec. 7, 22 cases, 3 deaths; St. Petersburg, Nov. 23-30, 8 cases; Warsaw, Nov. 16-23, 1 death.
Spain: Corunna, Nov. 30-Dec. 7, 1 death.

YELLOW FEVER.

British West Indies: St. Lucia, Dec. 2-6, 8 cases, 6 deaths.
Mexico: Vera Cruz, Dec. 1-14, 29 cases, 15 deaths.

CHOLERA.

Cuba: Havana, Nov. 29, 1 death from S. S. *Buenos Ayres*.
India: Bombay, Nov. 19-26, 4 deaths; Calcutta, Nov. 16-23, 76 deaths; Madras, Nov. 15-22, 27 deaths.
Straits Settlements: Singapore, Oct. 27-Nov. 2, 3 deaths.

PLAGUE—FOREIGN AND INSULAR.

India: Bombay, Nov. 19-26, 358 deaths; Calcutta, Nov. 16-23, 48 deaths; Karachi, Nov. 10-17, 71 cases, 49 deaths.
Russia: Batoum, Nov. 30, 1 case.
Turkey: Constantinople, Nov. 20-27, 1 case.
Hawaii: Honolulu, Dec. 5, 1 death.